

Adaptive Seating Designed for Occupant Protection Use

Adaptive seating designed for occupant protection use

Warning!

Manufacturer instructions are under constant revision.

These are current instructions for models currently in production (as of 5/99) ONLY.

This section DOES NOT include: models no longer on the market (but still in use), previous versions of instructions for current models.

Always consult with the manufacturer to confirm that instructions are matched and appropriate for your product's model, serial number and date of manufacture.

BESI Manufacturing, Inc.

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Hamilton, OH 45011

<http://www.besi-inc.com>

Phone: Customer service (800) 543-8222
Other (513) 874-0232

Faxes: (513) 874-0579

E-mails: www.besi-inc.com

Product family at a glance for clinicians:

Popular name for device	Model/Order #	Useful for which diagnoses?
Besi Harness	varies (see below)	school bus transportation

Infection control protocols or warranties available?

If yes, description attached?

History of Medicaid/insurance/state disability purchases for individuals?

If yes, roll call of states attached?

Product specifications at a glance for clinicians:

Device name	Height/Length ranges	Weight ranges	Recline ranges/options	RF range	FF range	Accessories for positioning
	WAIST SIZE RANGE					All have 3 zippered inserts for increasing waist size
BR-22 AI Small Harness	22-28"		Not Applicable	NO	Forward Facing Only	
BR-30 AI Medium Harness	30-36"		Not Applicable	NO	Forward Facing Only	
BR-38 AI Large Harness	38-44"		Not Applicable	NO	Forward Facing Only	

Product installation specifications at a glance for clinicians:

Appropriate vehicle environments: (check any that apply)

☐ Cars, vans, pickups ☒ School buses ☐ Ambulances ☐ Other (specify):

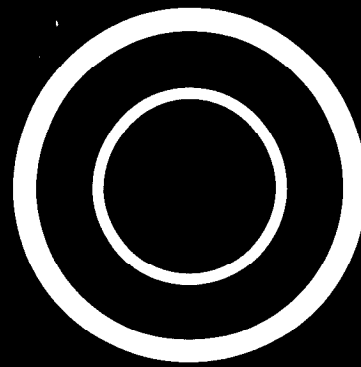
Product name	Tether needs/ Cam wrap needs	Tether/cam kits standard?	Installation assessment alerts
Besi, Harness	seat mount strap and inserts		

Price range categories:

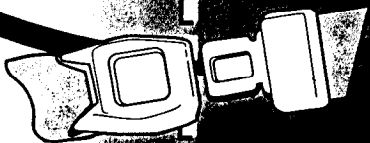
Purchasing programs for professionals or community programs:

Product name	Under \$50	\$51 – \$200	\$201 – \$500	\$501 – over
Besi, Harness		X		

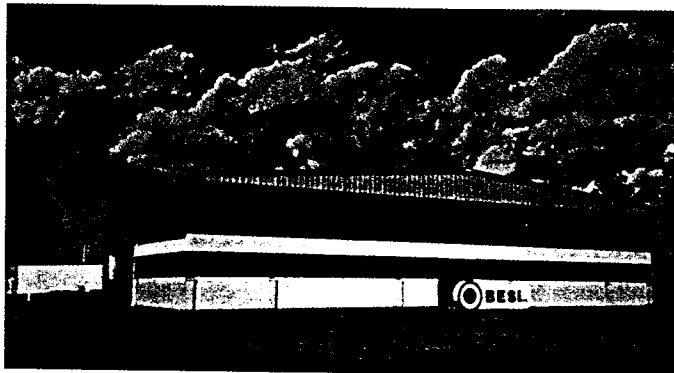
Other manufacturer comments regarding issues for medical/disability clinicians and safety specialists?



BESI, inc.



LEADING
THE
WAY
IN
QUALITY
TRANSPORTATION
PRODUCTS



BESI, Inc. has been leading the way in quality transportation products for over 20 years. Our growth has allowed us to maintain the largest inventory in the industry. Continued progress has included over 21,000 additional square feet, state of the art sewing machines and re-organizing to have a more efficient production system

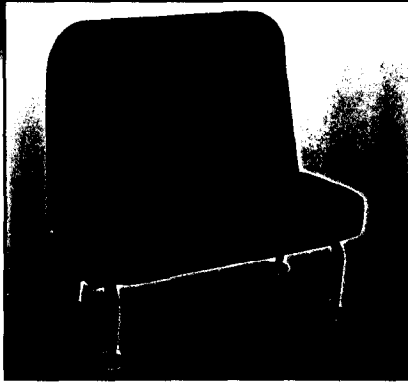
That progress has given us the ability to satisfy our customers with the highest grade of seat covers. Our goal is to supply our customers with all their seat cover needs, along with seat belts, drivers covers, restraint systems, seat foam and seat tape.

As a national supplier of OEM seat covers and a member of the National Suppliers Council, we are dedicated to quality, delivery and customer satisfaction.



NASDPTS
member Supplier Council





School Bus Seat Covers

42 oz. Standard Material:

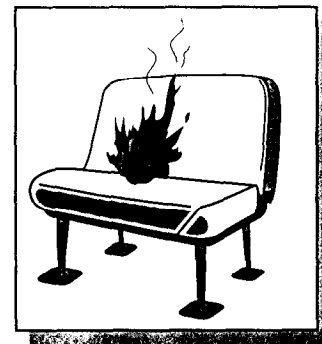
BESI's school bus upholstery fabric meets the requirements of the national minimum standard for school bus seating. It is a 42 ounce equivalent in physical properties utilizing jersey knit backing and meets the requirements of FMVSS 302 - fire retardancy standard, and FMVSS 222 - impact standard, when used in conjunction with OEM foam.

Sewn with #92 nylon thread using a lock stitch sew pattern at 6 stitches per inch. All ends are back stitched.

Kevlar® and Proform/Prevail® fireblock material:

Fire block covers passed all of the following burn tests: FMVSS 302, Bag burn test, Ath-891 (fireblock), Ky. bus spec., and FAR-25-853B (fireblock).

Cover are sewn with #92 bonded kevlar thread using a lock stitch sew pattern at 6 stitches per inch. All ends are back stitched.



Weight per square yard	26 oz.
Coating weight per square yard	18.5 oz.
Fabric weight per square yard	7.5 oz.

52 oz Material:

BESI's school bus upholstery fabric meets the requirements of the national minimum standard for school bus seating. It is a 52 ounce equivalent in physical properties utilizing jersey knit backing and meets the requirements of FMVSS 302 - fire retardancy standards, and FMVSS 222 - Impact standards, when used in conjunction with OEM foam.

Sewn with #92 nylon thread using a lock stitch sew pattern at 6 stitches per inch. All ends are back stitched.

Seat Covers

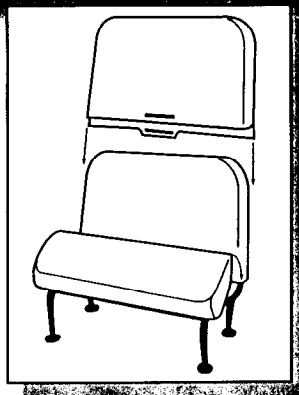
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1



Velcro Seat Covers:

BESI's innovative velcro seat covers are easy to install, in minutes. No staples, screws or rivets.

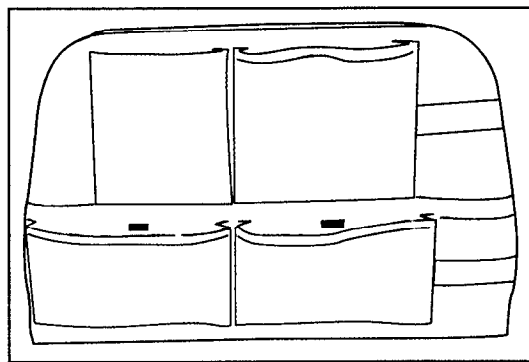


Pocket Barrier Cover:

BESI's driver side only pocket barrier is designed to to organize all those loose items for a safer ride. A quality cover, designed for the customer, features:

- Five pocket design.
- Broom holder.
- Concealed velcro enclosure to keep items secure in pocket.
- In velcro style seat cover only.

The pocket barrier is available in BESI's complete line of colors to match the seats in your bus. Also available in fire block.



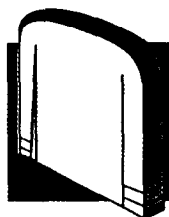
All our seat covers are tagged with part numbers, description, the month and year the cover was made and by whom the cover was sewn.

Please call for a list of popular seat cover part numbers and descriptions for easy ordering.

Seat Covers

2

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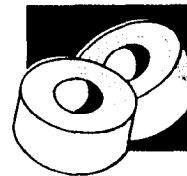


Seat Back Foam

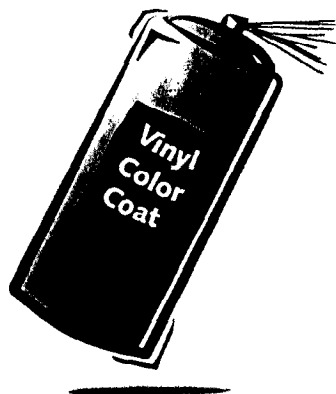
Certified to meet FMVSS 302 and FMVSS 222 requirements for all make & model buses.

Upholstery Tape

- For instant seat repairs
- 3" x 60 yard rolls
- Available in green, brown, grey, & blue



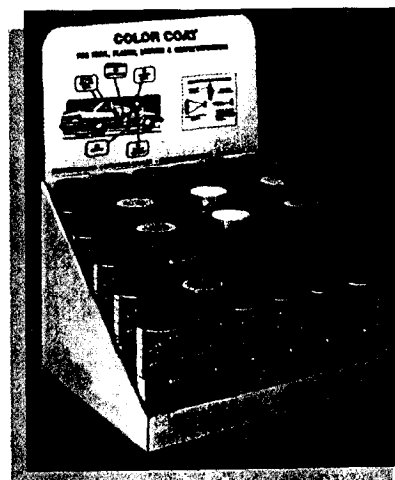
Vinyl Spray Paint



Color it perfect when using our vinyl spray paint. Gets rid of graffiti and hide patch work on seat covers. Convenient aerosol cans.

Colors available:

- Thomas Brown
- Thomas Green
- Thomas Grey
- Wayne Dark Green
- Wayne Blue
- Wayne Grey
- AmTran Green
- AmTran Chocolate
- AmTran Blue
- AmTran Grey
- AmTran Black
- Bluebird Brown
- Bluebird Green
- Carpenter Brown
- Carpenter Dark Green
- Carpenter Grey
- Carpenter Blue

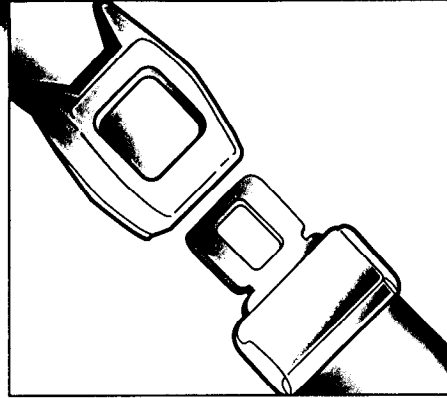


Seat Covers

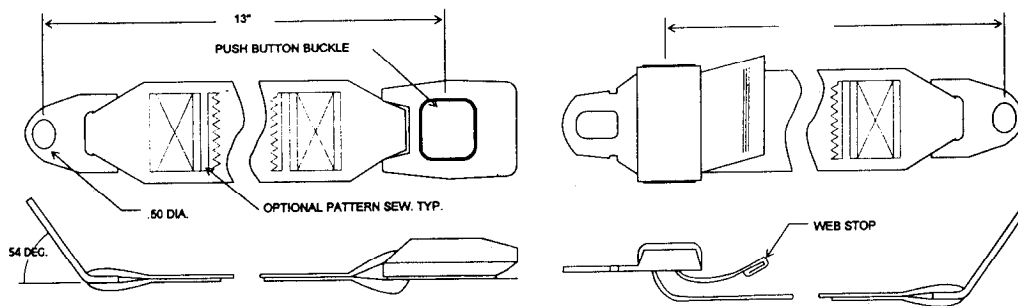
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Safety Belts, Straps and Attachments

Our belts are constructed of strong 2" nylon with type 602.4 webbing. The webbing breaking strength is 6,000 pounds. Stitching is standard automotive safety stitch with box X sew pattern. Thread type is 207 nylon. Our belts meet FMVSS 209, 213, 302 and each belt has a certification label. BESI, Inc. has several types of mounting hardware available. If you need a custom designed belt please give us a call we would be glad to work with you to meet your needs.

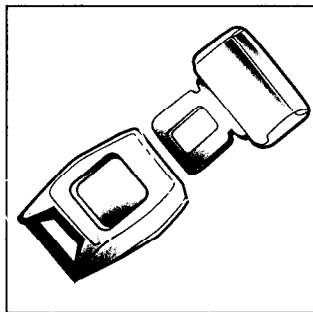


Belt Assembly Restraint System



Push Button
Release Buckle
and Attachment

Item #0021



Breaking strength capacity: 5,000 lb.

Belts & Mounts

4

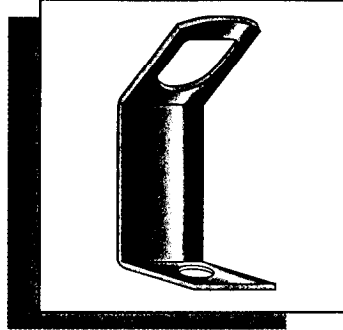
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Breaking strength capacity: 5,000 lb.

Standard size:

PBF - 60"
PBF - 45"
PBF - 70"
PBF - 75"



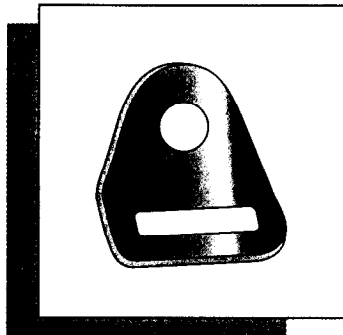
Floor
Mount

Item #0023

Breaking strength capacity: 5,000 lb.

Standard size:

PBA - 60"
PBA - 45"
PBA - 70"
PBA - 75"



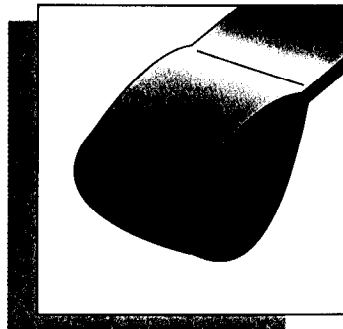
Seat
Mount

Item #0024

Loop Belt Mount does not meet
certified specs.

Standard size:

PBL - 60"
PBL - 70"
PBL - 75"



Loop Belt
Mount

Item #0025

Sold as a restraint belt ONLY

We custom make belts to fit the size you need.

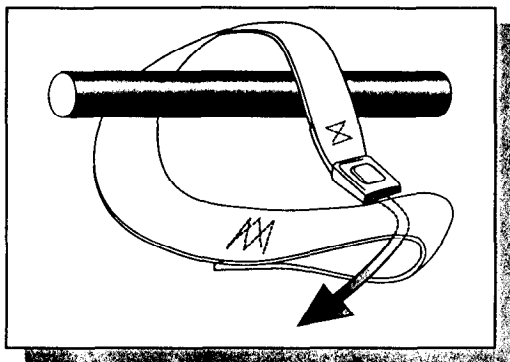
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Seat Covers



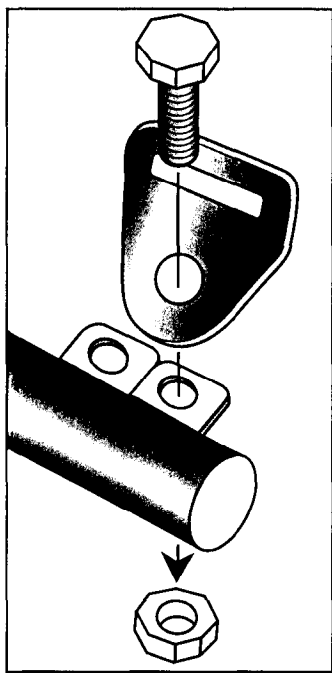
Installation instructions

How to assemble a Loop Belt



Place Buckle around bar and through loop on belt.

How to assemble seat mount belt



Bolt mount to seat frame

Assembly Directions

6

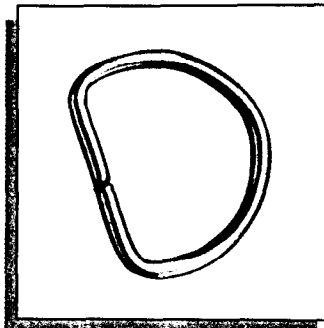
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For Series E and A Track

2" "D" Ring

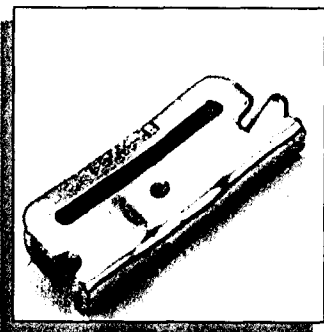
Item #0026



Breaking strength capacity: 5,000 lb.
Working load capacity: 1,600 lb.
Weight: .12 lbs.

Series E and A
Spring Loaded

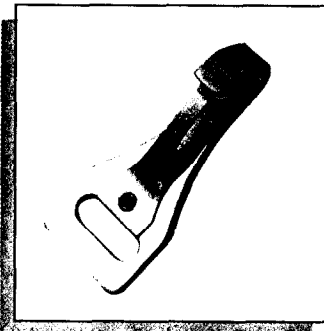
Item #0027



Breaking strength capacity: 4,500 lb.
Working load capacity: 1,500 lb.
Weight: .21 lbs.

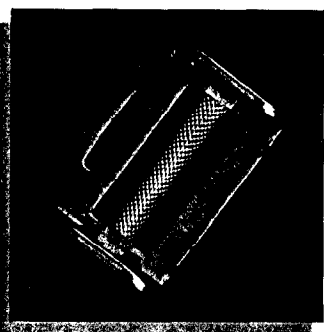
Square Snap
Hook

Item #0028



Pair Adjuster

Item #0029



Breaking strength capacity: *
Working load capacity: *
Weight: .21 lbs.

* Strength depends on type of webbing used

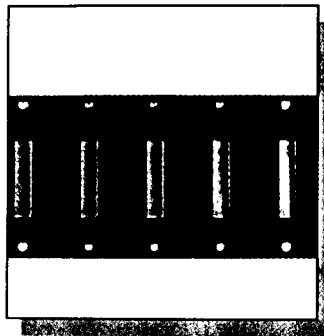
Belts & Mounts

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Series A Track Vertical

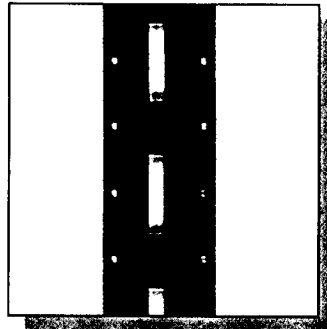
Item #0032



Material: High strength steel; 12
gauge
Minimum
yield: 50,000 psi.
Weight: 16.6 lbs.
Length: 10 ft.

Series A Track Vertical

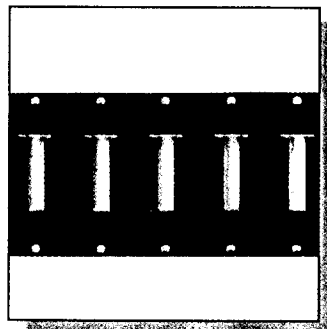
Item #0033



Material: High strength steel; 11
gauge
Minimum
yield: 50,000 psi.
Weight: 21.1 lbs.
Length: 10 ft.

Series E Track Horizontal

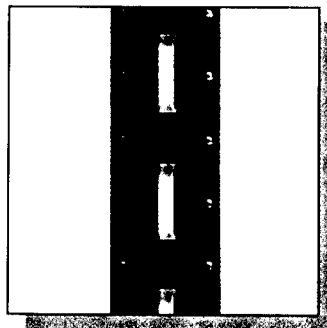
Item #0030



Material: High strength steel; 12
gauge
Minimum
yield: 50,000 psi.
Weight: 16.6 lbs.
Length: 10 ft.

Series E Track Vertical

Item #0031



Material: High strength steel; 11
gauge
Minimum
yield: 50,000 psi.
Weight: 11.6 lbs.
Length: 10 ft.

Series A & E Track

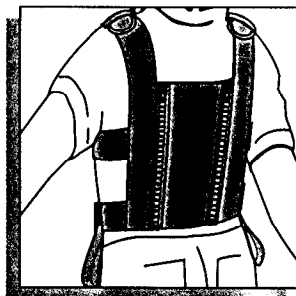
Adjustable Restraining Harness

Certified to take the place of a car seat when used in conjunction with a seat belt. Our Harness meet FMVSS 213 when used with a safety belt. The Harness comes in 3 color coded sizes; small, medium, and large. Each size has 3 separate zipper inserts that give you the ability to adjust to any size child.



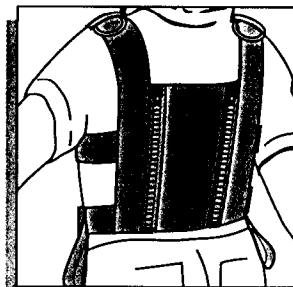
SMALL
Harness

Item # BR-22AI



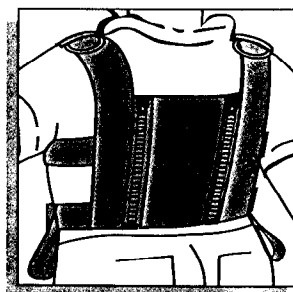
MEDIUM
Harness

Item # BR-30AI



LARGE
Harness

Item # BR-38AI



Color-coded by size for easy identification

Waist size range 22" to 28"

Insert #BI-22-2
child waist 24"

Insert #BI-22-4
child waist 26"

Insert #BI-22-6
child waist 28"

Product color code: Brown

Do not use more than one insert per harness at a time.

Waist size range 30" to 36"

Insert #BI-30-2
child waist 32"

Insert #BI-30-4
child waist 34"

Insert #BI-30-6
child waist 36"

Product color code: Maroon

Do not use more than one insert per harness at a time.

Waist size range 38" to 44"

Insert #BI-38-2
child waist 40"

Insert #BI-38-4
child waist 42"

Insert #BI-38-6
child waist 44"

Product color code: Grey

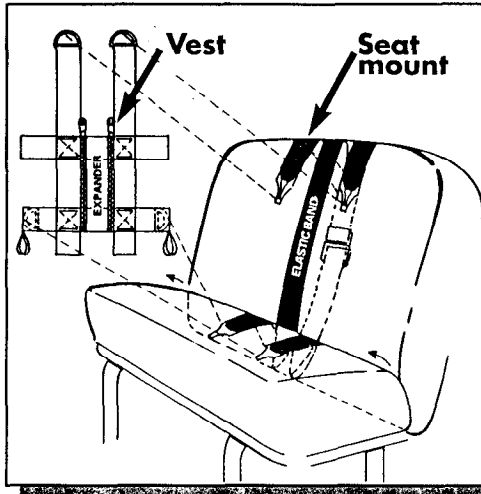
Do not use more than one insert per harness at a time.

Adjustable Restraining System

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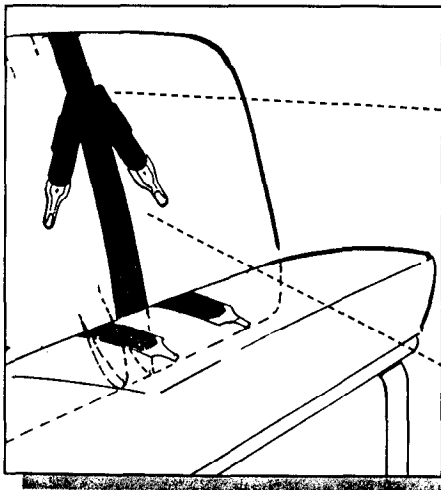
Installation instructions



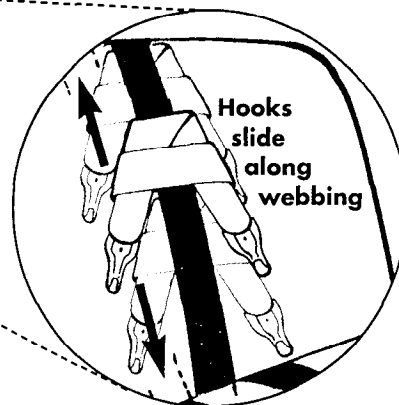
How to Install Restraining Harness

Unbuckle safety release of seat mount, lift bench seat and insert buckle end between seat cushion and backrest, leaving hooks on seat. Lay release end over top of back rest with upper hooks to front side of backrest. Fasten seat mount at the back of the seat. Place harness on passenger with zipper side on back. Use only one expander, as needed. Hook upper and lower D-rings, securing passenger in seat. Pull adjusting strap on seat back snug.

The Cuyahoga Sliding Seat Mount



Shoulder hooks slide along webbing to adjust seat mount to fit the height of the child. Webbing is color coded to match the harness vest.



Adjustable Restraining System

10

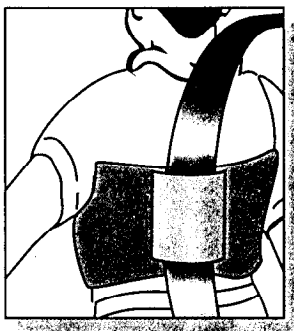
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Little People Restraint System

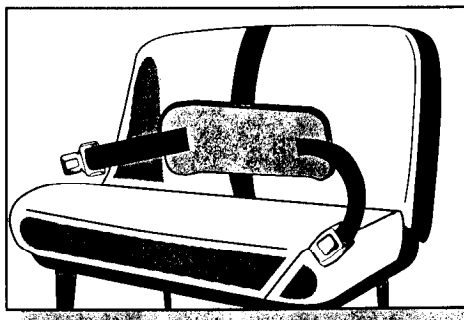
Our "Little People" Restraint System is designed to transport pre-school or handicapped children safely and comfortably. It can be easily installed on any standard seat.

How to Install Little People Restraint



The Cam-rap style system is designed to help with upper body mobility control.

Unbuckle safety release, lift bench seat and insert buckle end between seat cushion and backrest. Place child in restraint. Use buckle to secure restraint on child.

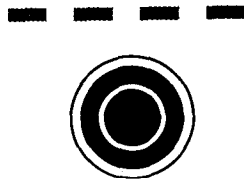


These restraint harnesses are not seat belts nor are they designed to provide protection in the event of a collision or sudden stop.

Adjustable Restraining System

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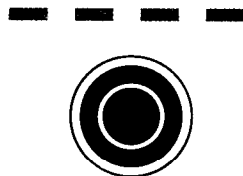
Notes



Notes



Notes



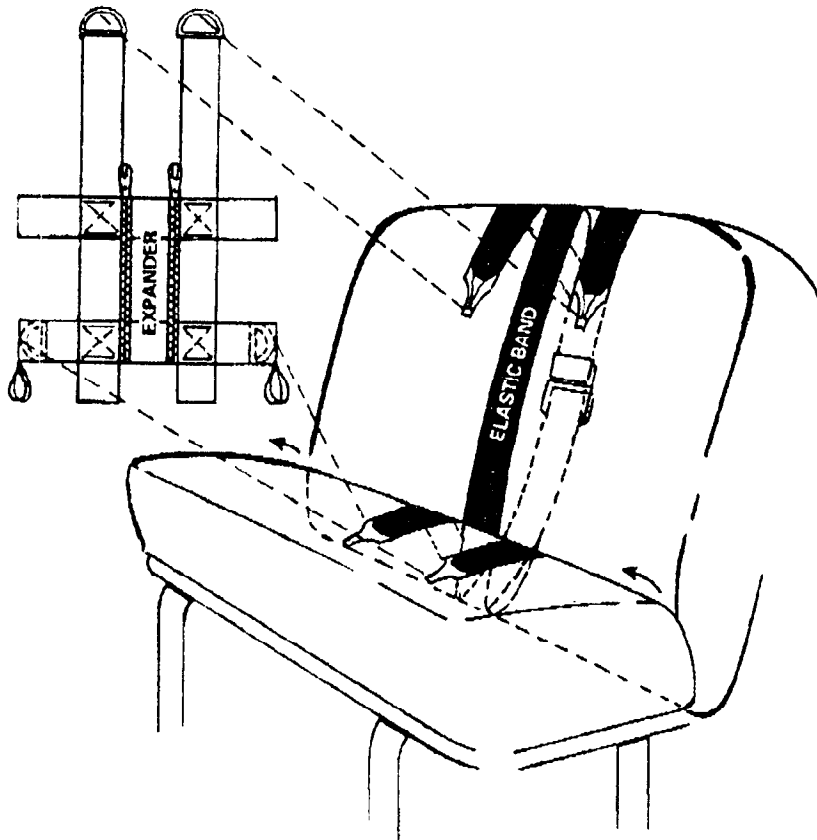


BESI Manufacturing, Inc.

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Web site: <http://www.besi-inc.com>



INSTALLATION

Unbuckle safety release, lift bench seat and insert buckle end between seat cushion and backrest, leaving hooks on seat. Lay release end over top of back rest with upper hooks to front side of backrest. Place harness on passenger with zipper side on back. Use only one expander per harness, as needed. Hook upper and lower D-rings, securing passenger in seat. Pull adjusting strap on seat back snug and affix excess strap end with hook and loop stitched on strap.

 BESI, INC. Manufacturer of Quality School Bus Seat Covers and Passenger Restraint Systems		9445 Sutton Place Hamilton, Ohio 45011 Toll Free 800-643-8222 In OH.....513-874-0233 FAX.....513-874-0579		These restraint harnesses are not seat belts, nor are they designed to provide protection in the event of a collision or sudden stop. Has been tested and meets or exceeds FMVSS 213.	
BR-22	22" BESI RESTRAINT HARNESS ONLY	BI-22-2	2" BESI RESTRAINT INSERT FOR 22"		
BR-30	30" BESI RESTRAINT HARNESS ONLY	BI-22-4	4" BESI RESTRAINT INSERT FOR 22"		
BR-38	38" BESI RESTRAINT HARNESS ONLY	BI-22-6	6" BESI RESTRAINT INSERT FOR 22"		
BR-22A	22" BESI RESTRAINT W/ SEAT MOUNT	BI-30-2	2" BESI RESTRAINT INSERT FOR 30"		
BR-30A	30" BESI RESTRAINT W/ SEAT MOUNT	BI-30-4	4" BESI RESTRAINT INSERT FOR 30"		
BR-38A	38" BESI RESTRAINT W/ SEAT MOUNT	BI-30-6	6" BESI RESTRAINT INSERT FOR 30"		
BR-22AI	22" HARNESS, MOUNT, & 3 INSERTS	BI-38-2	2" BESI RESTRAINT INSERT FOR 38"		
BR-30AI	30" HARNESS, MOUNT, & 3 INSERTS	BI-38-4	4" BESI RESTRAINT INSERT FOR 38"		
BR-38AI	38" HARNESS, MOUNT, & 3 INSERTS	BI-38-6	6" BESI RESTRAINT INSERT FOR 38"		
EXPANDERS come in three sizes: 2", 4", and 6".		SM-100	SEAT MOUNT FOR BESI RESTRAINT		

COLUMBIA Medical Manufacturing Corporation

P.O. Box 633
Pacific Palisades, CA 90272

<http://www.columbiamedical.com>

Phone: Customer service (800) 454-6612
Ordering (800) 454-6612
Other (310) 454-6612

Faxes: (310) 305-1718

E-mails: @Cmedonline@aol.com

Product family at a glance for clinicians:

Popular name for device	Model/Order #	Useful for which diagnoses?
Orthopedic Positioning Seat	Model 2000	cerebral palsy, spina bifida, muscular dystrophy, accidents and similar disorders

Infection control protocols or warranties available? No If yes, description attached? No

History of Medicaid/insurance/state disability purchases for individuals? Yes If yes, roll call of states attached? No

Product specifications at a glance for clinicians:

Device name	Height/Length ranges	Weight ranges	Recline ranges/options	RF range	FF range	Accessories for positioning
Orthopedic Positioning Seat	child: to 5 feet seat: 29"	child: 20-102 lbs. seat: 11 lbs.	seat to back: 88 degrees	NO	Forward Facing Only	seat depth extender #2025 Stroller Base: #2100

Product installation specifications at a glance for clinicians:

Appropriate vehicle environments: (check any that apply)

☒ Cars, vans, pickups ☒ School buses ☒ Ambulances ☒ Other (specify): Airplane

Product name	Tether needs/ Cam wrap needs	Tether/cam kits standard?	Installation assessment alerts
Orthopedic Positioning Seat	@ 65lbs. and up	yes	video included with car seat explains installation. Provides occupant protection only as a child safety seat correctly installed in a vehicle seat. Will not provide occupant protection on stroller base with tie-downs.

Price range categories:**Purchasing programs for professionals or community programs:**

Product name	Under \$50	\$51 – \$200	\$201 – \$500	\$501 – over
Orthopedic Positioning Seat (2000)				X
Seat Depth Extender (2025)		X		
Stroller Base (2100)				X

Other manufacturer comments regarding issues for medical/disability clinicians and safety specialists?

INSTRUCTIONS FOR USE

Columbia Model #2000

IMPORTANT:

Please read these instructions carefully. Failure to follow each of the following instructions can result in your child striking the vehicle's interior during a sudden stop or crash.

Your Columbia seat is suitable for children up to 60" (152 cm) in height and meets and exceeds the requirements of FMVSS #213. This requirement is the U.S. Federal standard for car seats for children up to three years old, and requires crash tests with a 35 lb (16 kg) test dummy at a 30 mph (48 kph) impact.

Although Federal standards have not been established for heavier body weights, Columbia seats have been crash tested and successfully withstood impacts using a 102 lb (46.3 kg) test dummy at 30 mph (48 kph).

Your Columbia seat also meets and exceeds the requirements of CMVSS 213.3, the Canadian car seat standard. Canadian consumers should carefully read the supplemental instruction sheet attached to the car seat harness. **Canadian consumers must use the supplemental tether strap regardless of the occupant's weight, as described in the supplemental sheet.**

WARNINGS:

★ Your Columbia seat is designed to fit a wide range of children. To insure a proper fit for your own child, it is important that your seat be correctly set up and installed before using it for the first time.

★ The Columbia car seat must not be used with:

- ☆ Vehicle seats that face to the side or rear;
- ☆ Vehicle seats with backs that can fold forward in a crash or sudden stop. Some seat backs automatically lock in an emergency. Check your owner's manual or with your dealer if you're not sure;
- ☆ Seating positions with belts that automatically surround the passenger as the door is closed;
- ☆ Seating positions with emergency-locking seat belts.

See the section below on seat belts to determine which of your vehicle's seat belts may be used

★ For children between 65 and 102 pounds (29.5 kg and 46.3 kg), your Columbia seat must be secured with both your vehicle's seat belt and the included tether strap.

★ To maintain its safety, if your seat or harness becomes badly worn or damaged, or if your seat is involved in an accident, regardless of speed and regardless how minor, your Columbia seat may no longer be effective and should immediately be replaced.

★ Metal tabs, etc., can become hot inside a closed automobile in the sun. To protect your child, check that the metal parts are not too hot before putting your child in your seat. If you park in the sun, covering your seat with a blanket, towel, etc., will help keep the metal parts from heating up.

★ Heavy, loose objects are dangerous in your vehicle. Always have your Columbia seat secured with your vehicle's seat belt,

even when your Columbia seat is unoccupied, as a safety precaution for yourself and other occupants.

★ The harness must only be used with your complete seat. Do not try to use the harness independently of your seat.

★ The Federal government recommends that children under twelve years of age ride in the rear seat. The center of the rear auto seat is the safest seating position in most vehicles, followed by the passenger-side rear seat, and then the driver-side rear seat. Use the center rear seat whenever possible. Make sure that the front seats are far enough away from your Columbia seat to minimize the risk of your child striking them in an accident.

★ Never leave your child unattended in your automobile.

WHERE TO INSTALL YOUR SEAT

Passive restraints: seatbelts and airbags

Your Columbia car seat **cannot** be used in seats that have "passive restraint"-type seat belts, such as any kind of self-locking seat belt that the passenger does not have to fasten themselves. For example, some vehicles have shoulder belts that slide into place automatically when the passenger closes the door, and then slide out of the way automatically when the passenger opens the door. Because the seat belt tension cannot be properly controlled, your Columbia car seat **must not** be used with this kind of passive restraint, or any other kind of passive restraint system.

Your Columbia seat **must not** be used in seats protected by airbags, unless your vehicle has a switch to turn the airbag off. Passenger-side airbags can cause serious injury or death to children in safety seats.

Placement Of Your Columbia Seat In Your Vehicle's Seat

If the lip of your Columbia seat projects more than one inch over the edge of your vehicle's seat bench, then the seat bench is too shallow, and your Columbia seat **must not** be installed in that seating position.

Seat belts

Your Columbia seat is designed for use only with certain kinds of lap or combination shoulder/lap belts. Read the section below on seat belts to determine which of your vehicle's seat belts are suitable.

Lap Belts

Lap belts that have no retractor, but rely on the passenger to pull on the free end of the belt to set the lap belt to the proper tension can be used to secure your Columbia seat. Simply attach the locking clip as shown in Figure 1 once you have adjusted the belt to the proper tension. Snug the locking clip within 1/4" of the buckle.

Another kind of lap belt feeds into and out of a retractor. When you pull on the free end of the belt, if you stop pulling, or allow the belt to go back into the retractor, the belt "locks up" and can't be pulled out any further until you let the belt go all the way back into the retractor. This kind of seat belt can be used to secure your Columbia seat.

Some lap belts only lock up when the nose of the vehicle dips, for example, during an accident, or when the driver steps on the brake. These are "emergency-locking" seat belts.

Because these belts cannot be properly secured, they must not be used to secure your Columbia seat.

Combination lap and shoulder belts

“Continuous-Loop” lap and shoulder belts are those that have a lock plate (the “male” part of the seat belt buckle) that slides freely along a continuous piece of webbing running from the hip to the shoulder retractor. These belts can be used to secure your Columbia seat. Once the seat belt is snug, simply attach the locking clip within 1/2” (13 mm) of the lock plate as shown in Figure 1.

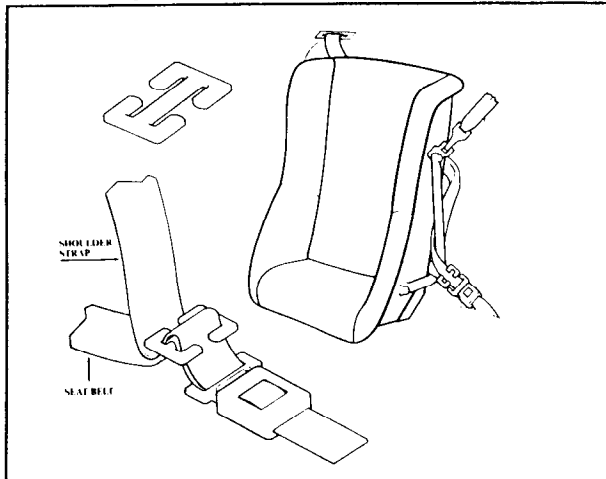


Figure 1: Use of the locking clip

Some combination lap and shoulder belts have what is called a “sewn lock plate”. The lap belt is sewn to the side of the lock plate (the “male” part of the seat belt buckle), while the shoulder belt is sewn to the top of the lock plate. Each belt feeds into its own emergency-locking retractor. Because the seat belt tension cannot be properly controlled with these belts, they must not be used to secure Columbia seats.

USE AND INSTALLATION

STEP 1: Operating Your Car Seat Buckle

Pressing the red button will open the buckle. To fasten the buckle, insert the two metal tabs into the top of the buckle until they click into place. Never lubricate the buckle.

STEP 2: Adjusting Shoulder Strap Height

Your Columbia seat has four pairs of pre-cut slots, at different heights up its back. The shoulder straps must be used in the slots located just above your child's shoulders. If you need to readjust the shoulder straps to different slots, feed the metal slides on the back of your Columbia seat through the slots. To feed them through the slots, first twist the black metal slides sideways so that they will fit through the slots and push them through the slots. **Do not attempt to unthread the straps from the metal slides to get them through the slots. Never lubricate the adjusters.**

STEP 3: Adjusting Harness Fit

In adjusting the harness, the crotch strap is the first part to be adjusted. Loosen the other straps and place your child in your

Columbia seat. Adjust the length of the crotch strap with the metal slide on the underside of the seat. The length of the crotch strap should be adjusted so that the lap belt of the harness is down over the bony part of your child's hips, not over their soft stomach area. With the lap belt positioned correctly over your child's hips, the buckle will be located quite low, where it should be.

With the crotch strap adjusted, take up slack in the shoulder straps with the metal slides on the back of the seat, and with those on the front. By using the metal slides on the back of the seat to control the belt length, you may adjust the harness so that the adjusters on the front shoulder straps rest on a comfortable part of your child's body, *i.e.*, below the collarbone.

Using the fine adjusters on the front, adjust the length of the harness for a comfortable fit. **The harness must fit snugly for proper protection.** Adjust the tightness of the shoulder straps so that you can fit one or two fingers (but no more) between the shoulder strap and your child's collar bone.

STEP 4: Location of Chest Clip

The chest clip acts to keep the shoulder straps from sliding down off your child's shoulders. Make sure that the chest clip is even with an imaginary line drawn from armpit to armpit. If it is too high, it poses a strangulation hazard; if it is too low, it will not keep the shoulder straps in place.

STEP 5: Adjusting the Head Pads and Positioning Pads

The head pads may be adjusted for height. Located behind and underneath each head pad is a plastic ball, attached to the lace that passes through the head pad. Squeeze the button on each ball and slide the ball up or down to change the height of the head pads.

The height of the positioning pads is set by tying them into place at the desired height. Simply run the lace through the grommets at the appropriate height, and then tie the pad into place.

STEP 6: Securing The Seat In your Vehicle

Your Columbia seat is designed to face forward in your vehicle in an upright position. Your seat is held in place with your vehicle's own seat belt and, for children 65 pounds (29.5 kg) or above, with your vehicle's own seat belt and the included tether strap. **Important: do not attempt to place your vehicle's seat belt around the front of your Columbia seat, the way many infant seats are held in.**

Thread your vehicle's seat belt through the two metal tubes on the side of your Columbia seat, as shown in Figure 2. Connect your seat belt buckle and, while kneeling in your Columbia seat, adjust your vehicle's seat belt as tight as possible to hold your Columbia seat in place. If the seat belt is a combination lap/shoulder belt, pull upwards on the shoulder portion of the belt to tighten the belt, then install the locking clip. Kneeling in the seat helps secure it; when you remove your weight from the seat, your vehicle's upholstery will spring back into shape and keep the seat in place even more securely.

Make sure that the seat belt buckle lies to one side or the other of a side tube, not resting across it.

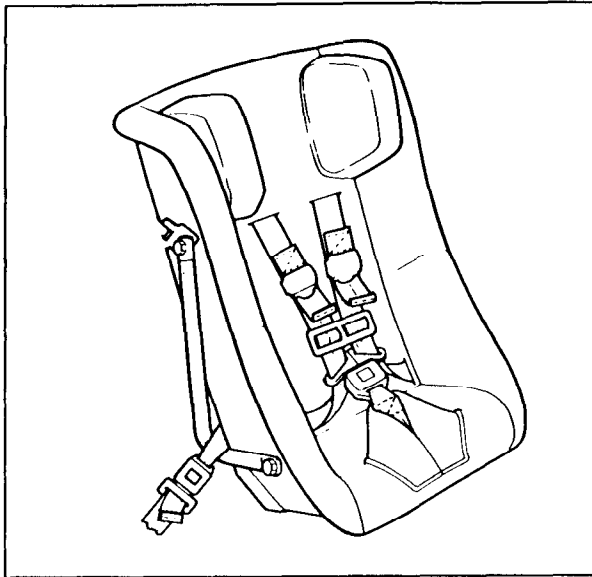


Figure 2: Securing Columbia seat with vehicle's seat belt

STEP 7: Installing The Locking Clip

- ★ Install your seat as described above, using your vehicle's seat belt.
- ★ Hold your vehicle's shoulder/lap belt webbing and the seat belt tab to stop it from sliding. Then release the tab from your seat belt buckle.
- ★ Fold the webbing and thread it through the locking clip, one side at a time. Keep the locking clip as close as possible to your seat belt tab - no further than ½" away.
- ★ Snug the clip against your seat belt tab. See Figure 1.
- ★ Buckle your seat belt to see that the clip has been correctly installed, with all slack webbing gone and the seat tightly in place.

USE OF THE TETHER STRAP

A tether strap is supplied with your Columbia seat. For children between 65 and 102 lb. (29.5 and 46.3 kg), **this tether strap must be used in addition to your vehicle's seat belt.** Use of the tether is optional for children under 65 lb. (29.5 kg), but Columbia recommends that the tether be used regardless of your child's weight. Use of the tether will enhance the stability of your Columbia seat for any weight child, particularly if your vehicle has very soft or very upright seats. If you use the tether strap, install it in your vehicle as instructed below.

INSTALLING THE TETHER

The tether strap is "V"-shaped. The bottom of the "V" attaches to your vehicle. The two top ends attach to your Columbia seat by hooking onto metal brackets located on the upper ends of each metal tube on the sides of your Columbia seat. The metal anchor plate on the bottom of the "V"-shaped tether must be bolted to your vehicle.

Where to install the tether anchor depends on your vehicle. If you are installing your car seat in a sedan, the anchor plate bolts to the parcel shelf in front of the rear window.

Note: the parcel shelf must be fixed and made of metal underneath. You can tell if it is made of metal underneath by looking in the trunk. If the parcel shelf is adjustable or is not metal underneath, follow the instructions for a hatchback, van, or station wagon; in these cars, the tether anchor bolts to the cargo floor. See Figures 3 and 4.

WARNING: before drilling any hole in your vehicle, make certain the gas tank, pipes, cables, etc., are not in the way and will not be damaged. The tether anchor must be mounted directly in a secure metal panel. If necessary for access, trim the carpeting, hardboard parcel shelf, or other trim for clearance. Make certain that the tether webbing does not rub against any sharp edges.

Sedans built 1989 or after, with a fixed rear parcel shelf:

Mounting nut: Most cars built after 1989 or after, feature a manufacturer-installed tether mounting nut welded to the underside of the parcel shelf. Because of its location, this mounting nut is not normally visible. To find it, open the trunk and look up at the bottom of the parcel shelf. Some cars have one mounting nut, while others will have more than one. If your vehicle has such a nut, use it. Insert a pointed object (nail, etc.) into the nut from below, and up through your parcel shelf carpeting. From the other side, using the protruding object as your guide, trim a small hole in the carpeting. This will allow the tether bolt to screw into the nut from above. Attach the anchor as shown in Figure 3.

Sedans built before 1989, with a fixed rear parcel shelf:

Cars built before 1989 generally will not have manufacturer-installed tether mounting nuts. Instead, you'll need to drill a 7/16" hole and use the nut supplied with the tether. With your Columbia seat in your vehicle, mark a spot on the center line of your Columbia seat about 8" behind the seat, on the parcel shelf. Open the trunk and, using a flash-light if necessary, inspect the

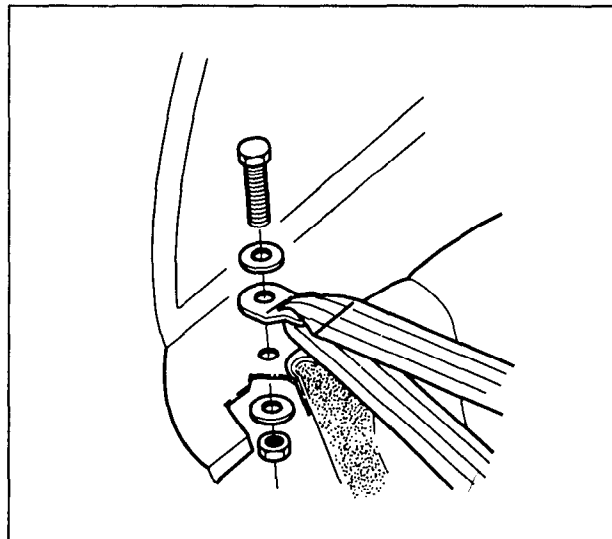


Figure 3: Tether anchoring on parcel shelf

bottom of the parcel shelf. Make sure there are no dangerous obstructions underneath the spot that you have chosen. If it is clear, drill a hole for the anchor bolt. Attach the tether anchor as shown in Figure 3.

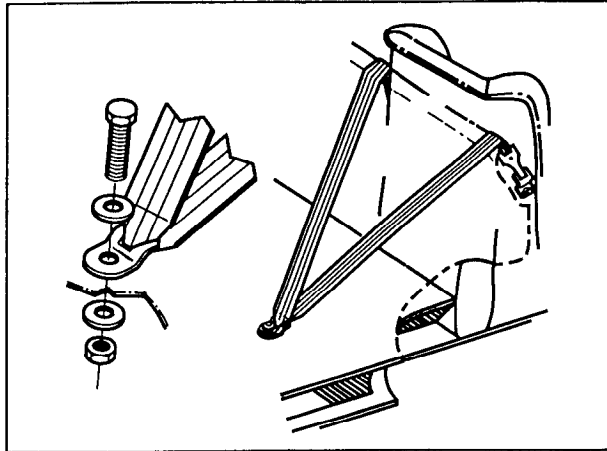


Figure 4: Tether anchoring on vehicle floor

Hatchbacks, vans, station wagons, and sedans without a fixed metal parcel shelf:

With your Columbia seat in your vehicle, mark a location on the center line of the seat and far enough back so that the tether strap will create no greater than a 45-degree angle from the horizontal (the floor of your vehicle). See Figure 4. Look under your vehicle and make sure there are no dangerous obstructions (c.g., gas tank, cables) underneath this spot, and that you will be able to reach it easily. If it is clear, drill a hole for the anchor plate bolt. Attach the anchor as shown in Figure 5. The anchor plate should be as close to horizontal as possible, so that the force on the tether anchor acts from the side.

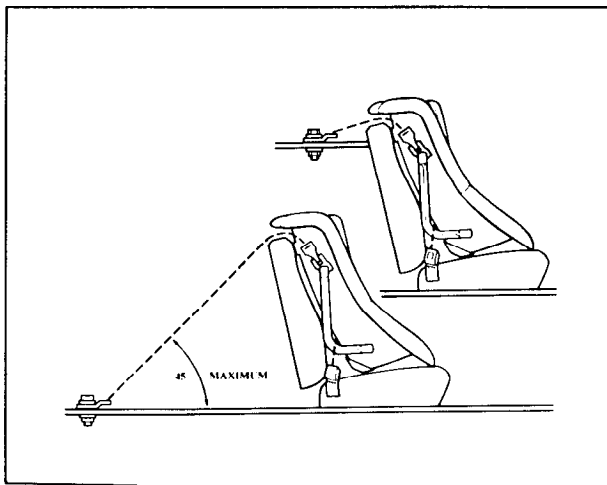


Figure 5: Tether anchoring methods

Pickup trucks

You can install your Columbia seat in the passenger-side front seat **only if there is no airbag on that side** (or if the airbag can be switched off). If your pickup truck has a rear seat, install your Columbia seat there. You can install the tether in the rear wall of the cab, a few inches below the rear window.

Attaching the tether to a rear seat belt

You can attach your Columbia seat's tether to the seat belt of the seat behind it, but only if the seat belt is one of the usable kinds described above. You may need a second locking clip to secure that seat belt. This is a good option when installing in minivans and some school buses, when you cannot easily reach the floor of the vehicle.

Connecting the tether strap:

With your Columbia seat in place in your vehicle and the seat belt firmly tensioned, hook the tether onto the metal brackets on the upper ends of your car seat's side tubes. Cinch the tether tight with the tether strap adjusters.

CLEANING INSTRUCTIONS

The cover of your Columbia seat may be machine washed and dried. To remove the cover for washing, first remove the harness and head pads. Then remove the foam block inside each head pad cover. The harness webbing may be washed with a damp, soapy sponge and air-dried. Use no chemicals or bleach, as they may weaken the harness.

SOME TIPS WHEN FLYING

Some airplane seats may be too narrow for your Columbia seat. Most airplanes have armrests between their seats which either flip up or are removable. By flipping up or removing the armrest, you will gain enough width for your Columbia seat. Ask your flight attendant for assistance. If your child's feet don't touch the floor, use your carry-on luggage as a footrest. Your Columbia seat has been FAA approved for use in aircraft (see decal on side of seat).

Store these instructions in the pocket on the side of your seat for future reference.

COLUMBIA

Columbia Medical Mfg. Corp.

Post Office Box 633

Pacific Palisades, CA 90272 U.S.A.

(800) 454-6612 or (310) 454-6612

Fax (310) 305-1718

E-Mail: CMedOnline@aol.com

Visit us at <http://www.ColumbiaMedical.com>

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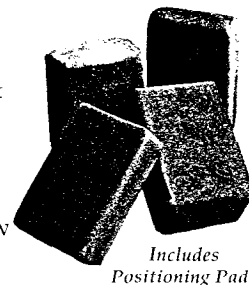
ORTHOPEDIC POSITIONING SEAT

Why do parents love it?
See previous page!

How quickly your child outgrew that infant car seat! After all, those car seats are only rated for children up to about 40 lbs.

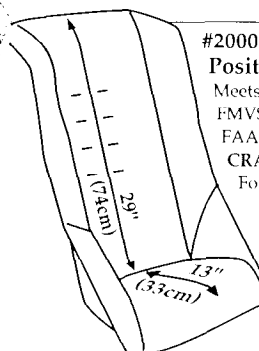
Where are you going to find the *size, support and safety* you require in a new car seat? From a Columbia Car Seat, the #1 choice since 1986. Our years of real world experience give you peace of mind, knowing your child is comfortable and secure.

- The **LIGHTEST** special car seat available—*only 11 lbs.!*
- Meets all Federal safety standards
- Approved for use in all cars, vans, school buses—even airplanes
- Sleek and stylish, with a padded, washable cover
- Padded head supports and 5-point harness are easily adjusted so the seat grows with your child
- Includes full positioning pad set for the small or slender child
- Fits many stroller bases—just right in the Columbia Mobility Base shown below



#2000

Anthony, 52" tall
and 60 lbs., with Stacey



#2000 Columbia Orthopedic Positioning Seat

Meets Federal safety standard FMVSS # 213 for car seats.

FAA approved for use in aircraft.

CRASH TESTED TO 102 LBS.

For children 20-102 lbs., up to 5 ft. tall.

Seat-to-top height: 29" (74cm)

Seat depth: 13" (33cm)

Inside width at front: 15.5" (39cm)

Inside width at back: 14" (36cm)

Outside width: 19" (48cm)

Seat to back angle: 88°

WEIGHT: 11 LBS. (5KG)

MOBILITY BASE

Why always leave the Car Seat in your car! Our Mobility Base is custom designed for the Columbia #2000 Car Seat. Perfect for use at the mall, playground or when traveling.

- Built for easy use—folds compactly to carry or store
- Built for durability—strong yet lightweight frame
- Built for comfort and security—height-adjustable footrest with ankle straps
- Built to go everywhere—large wheels ensure a smooth ride over all surfaces

COLUMBIA
SHARING THE CARING

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P.O. Box 633, Pacific Palisades, CA 90272 U.S.A.

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E-Mail: CMedOnline@aol.com

RICKSHAW REHAB EXERCISER

Builds the muscle strength needed to make the best use of a wheelchair! The Columbia Rickshaw duplicates the exact arm and shoulder motions needed for easy propulsion, transfer and pressure relief.

#3000

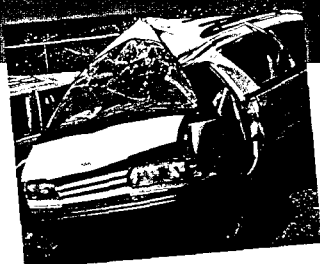
Fits all manual wheelchairs.
All steel construction.
Adjustable oar grip height.
Weight capacity per oar: 0-100 lbs.
Overall length: 50 in.
Outside width: 34 in.



- Strengthen specific arm and shoulder muscles by facing forward or backward while seated in the wheelchair, and pumping the weighted oars
- Easy to customize for an individual program; use equal weight on both sides or less on a weaker side
- Uses standard disc weights (not included) for convenience and economy
- Oars pivot independently or together
- Short zig-zag oars and compact design use surprisingly little floor space
- Built tough for years of service, even in a heavy-use institutional setting

Dear Columbia
My two children and I were involved in a near fatal car crash. We were rear ended by a drunk driver. Our van was sent speeding into a four foot ditch, it also flipped four times. It rested in the ditch and caught on fire at the rear and by the steering wheel. My nine year old daughter who has spastic cerebral palsy and who is confined to a wheelchair, was using one of your seats. If she had been in her wheelchair she would not be with us today...
Karen W., Orlando, FL

You'd Write Us Too, If It Happened to You!



To whom it may concern:
My four year old son was in this van in your Car Seat which was tethered to the floor...he escaped without a scratch, did not even break his glasses. I am fully convinced that the Car Seat saved his life....
Mrs. Robin C.
Morganza, LA

I am writing this letter to thank you for making such a wonderful car seat! I am very impressed! My little boy, Seth, has Cerebral Palsy. He is 6 years old and is a healthy 65 lb. boy. Yesterday, we were in a car accident. We were hit extremely hard on the passenger side. If Seth had not been in this car seat, he would have been seriously injured, possibly even killed. Because the car seat held him in so securely, Seth was not hurt at all! Thank you, with all of my heart! And God bless you...
Roba P.
Fort Collins, CO

See the Car Seat
they're talking about
on the back page!

Circle 10 on Reader Service Card

Orthopedic Positioning Seat

Columbia #: 2000 / Silver Fox Grey and Designer Blue

This car seat is the number one car seat in the US! What makes this item so popular is its longevity and the amount of support it provides larger children. Standard baby car seats are crash tested for children weighing only 35-45 lbs. The Orthopedic Positioning Seat has been crash tested for children weighing 20-102 lbs and up to 5 ft tall. This means that the child will be able to use the car seat for many, many years. As the child grows the seat is adjustable and can grow along with the child by adjusting the head pads, five-point harness; or, by adding an accessory that increases the seat depth by 2 1/2" (**Seat-Depth Extender #2025**). Also included are four positioning pads to be used as building blocks that will provide support where support is most needed.

The Ultimate Mobility Base

Columbia #2100

A popular accessory to the car seat is the Ultimate Mobility Base. This is a stroller *custom designed* for the Orthopedic Positioning Seat. The all aluminum stroller is durable yet lightweight and has an uncomplicated fold design, making it easy to transport. The large 70 in rear tires give a smooth ride over all types of terrain. A unique feature of this stroller is the one-hand, bolt-action positive lock mechanism to easily secure the seat onto the base.

CONVAID PRODUCTS, INC.

P.O. Box 4209
Palos Verdes, CA 90274

<http://www.convaid.com>

Phone: Customer service (888) CONVAID Faxes: (310) 539-3670
Other (310) 539-6814

E-mails: convaid@convaid.com

Product family at a glance for clinicians:

Popular name for device	Model/Order #	Useful for which diagnoses?
EZ Rider Transport Model 12, 14, 16, 18	EZ12B, EZ14B, EZ16B, EZ18B	When wheelchair is required
Cruiser Transport Model 11,13,14,16	CR11B, CR13B, CX14B, CX16B	When wheelchair is required
Safari Tilt Transport Model 12, 14, 16	SFT12B, SFT14B, SFT16B	When wheelchair is required
Expedition Tilt Transport Model 12	EXT12B	When wheelchair is required
Metro Transport Model 12, 14	ME12B, ME14B	When wheelchair is required

Infection control protocols or warranties available? No If yes, description attached? Warranties available in User Guide

History of Medicaid/insurance/state disability purchases for individuals? Yes If yes, roll call of states attached? No

Product specifications at a glance for clinicians:

Device name	Height/Length ranges	Weight ranges All models crashed at weight identified	Recline ranges/options	RF range	FF range	Accessories for positioning
EZ Rider Transport Model 12, 14, 16, 18	to be Rx by therapist	EZ12B - 60 lbs. EZ14B - 100 lbs. EZ16B - 100 lbs. EZ18B - 170 lbs.	10 degree fixed tilt- All Models	NA	All	over 20 positioning accessories
Cruiser Transport Model 11,13,14,16	to be Rx by therapist	CR11B - 60 lbs. CR13B - 100 lbs. CR14B - 100 lbs. CR16B - 170 lbs.	30 degree fixed tilt- All Models	NA	All	over 20 positioning accessories
Safari Tilt Transport Model 12, 14, 16	to be Rx by therapist	SFT12B - 60 lbs. SFT14B - 100 lbs. SFT16B - 170 lbs.	5-45 degree tilt standard 0-40 degree recline optional	NA	All	over 20 positioning accessories
Expedition Tilt Transport Model 12	to be Rx by therapist	EXT12B - 60 lbs.	10-35 degree tilt standard 0-20 degree recline optional	NA	All	over 20 positioning accessories
Metro Transport Model 12, 14	to be Rx by therapist	ME12B - 60 lbs. ME14B - 100 lbs.	30 degree fixed tilt	NA	All	Not applicable

Product installation specifications at a glance for clinicians:

Appropriate vehicle environments: (check any that apply)

☒ Cars, vans, pickups ☒ School buses ☐ Ambulances ☒ Other (specify): Public Transport with approved Tie Down and Restraint systems

Product name	Tether needs/ Cam wrap needs	Tether/cam kits standard?	Installation assessment alerts
EZ Rider Transport Model 12, 14, 16, 18	Not applicable	Not applicable	All models require SAE-J2249 compatible Wheelchair Tie-down and Occupant Restraint System
Cruiser Transport Model 11,13,14,16	Not applicable	Not applicable	All models require SAE-J2249 compatible Wheelchair Tie-down and Occupant Restraint System
Safari Tilt Transport Model 12, 14, 16	Not applicable	Not applicable	All models require SAE-J2249 compatible Wheelchair Tie-down and Occupant Restraint System
Expedition Tilt Transport Model 12	Not applicable	Not applicable	All models require SAE-J2249 compatible Wheelchair Tie-down and Occupant Restraint System
Metro Transport Model Model 12, 14	Not applicable	Not applicable	All models require SAE-J2249 compatible Wheelchair Tie-down and Occupant Restraint System

Price range categories:

Product name	Under \$50	\$51 – \$200	\$201 – \$500	\$501 – over
EZ Rider Transport Model 12, 14, 16, 18				X
Cruiser Transport Model 11,13,14,16				X
Safari Tilt Transport Model 12, 14, 16				X
Expedition Tilt Transport Model 12				X
Metro Transport Model Model 12, 14				X

Purchasing programs for professionals or community programs:

Other manufacturer comments regarding issues for medical/disability clinicians and safety specialists?

ENGLISH



Convaid Compact, Folding Mobility Systems

User's Guide

Safari Tilt™ Dependent Positioning Chairs
Expedition Tilt™ Dependent Positioning Chairs
Cruiser™ Mobile Positioning Chairs
EZ Rider™ Support Chairs
Metro™ Chairs
Compax™ Travel Chairs for Adults



SAVE THIS BOOK FOR FUTURE REFERENCE





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Technical assistance or repair information hours are:

Monday-Friday, 6 a.m. to 5 p.m. PST

Before calling:

Please fill in the following information. We will be able to help you faster if you have the exact information indicated below before you call.

Serial number of your chair: _____

Model of chair: _____

Date purchased: _____

Notice:

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Convaid Compact,
Folding Mobility Systems

User's Guide

Safari Tilt™ Dependent Positioning Chairs

Expedition Tilt™ Dependent Positioning Chairs

Cruiser™ Mobile Positioning Chairs
–including C-2000™

EZ Rider™ Support Chairs

Metro™ Chairs

Compax™ Travel Chairs for Adults



Table of Contents

Setting Up	Unpack	1
	Unfold	1
Fitting Guide	Three point seat belt and H-harness strap	2
	Seat depth	3
	Seat back height	4
	Seat width	4
	Foot support adjustment	5
	Footplate depth adjustment (one and two piece footplates)	6
	Seat-to-footplate height adjustment	6
	Seat-to-back angle adjustment	7
	Additional supports: Swing-away lateral support–single flap	8
	Swing-away lateral support–double flap	8
	Full torso lateral support	9
	Adductor	9
	Abductor	9
	Cut back seat-2" (5cm)	10
	Heavy duty seat	10
	Headrest	10
	Seat back extension	11
	Foam wedges	11
	Stabilizing hat	11
	Heel loops/Ankle straps	12
Accessories	Tray	12
	Canopy	13
	Rain cover	13
	Fleece pad	13
	Bus transport models	14
Miscellaneous	Handle reverse	15
	Fabric removal	15
Wheel Locks	Locking and unlocking	16
	Anti-shimmy	17
	Wheel lock adjustment	17
Convaid Models	Safari Tilt	18
	Expedition Tilt	24
	Cruiser	28
	EZ Rider/Compax	29
	Metro	30
Consumer Information	Safety instructions	31
	Curb warning	31
	Salt water maintenance	31
	Maintenance	31
	Limited lifetime warranty	Back cover
	Fast factory service: Warranty repair	Back cover
	Non-warranty	Back cover
iii		



Setting Up

Unpack

Check to see that the following items are included with the chair:

- Left and right footplate or one solid footplate.
- Accessories ordered. Footplates are optional with Metros.

Unfold

1. Stand chair on front casters. **Fig.1**
2. Grasp one handle and push down on the opposite seat tube. **Fig.2**
3. Press down firmly on seat tubes to ensure the chair is completely unfolded. **Fig.3**
4. Use foot to lock the rear brace into a straight position. **Fig.4**
5. For EZ Riders, pull handle up and lock into place. **Fig.5**

For Safari Tilt and Expedition Tilt, see pages 18 and 24, respectively.

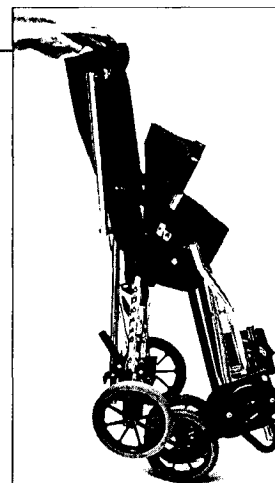


Fig.1

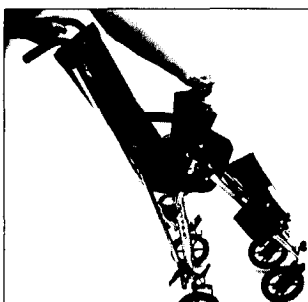


Fig.2

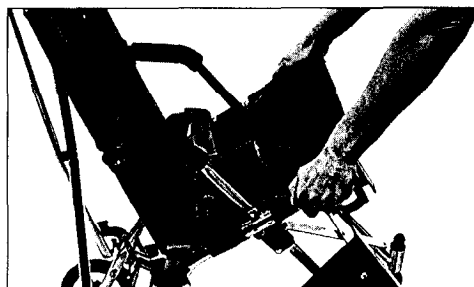


Fig.3

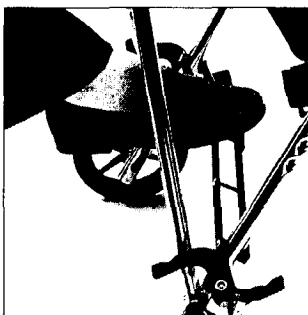


Fig.4

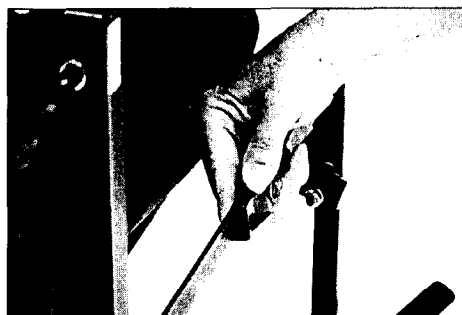


Fig.5



Fitting Guide

Convaid's lightweight, folding chairs are designed to be more than just a convenient chair. Before ordering the chair, the child or user's height, weight and seating measurements should have been determined and the correct size chair ordered. Properly-fitted Convaid chairs will provide years of comfortable use. And, as your child grows, refer back to this fitting guide to change the dimensions of the chair.

Correct seating and positioning encourages good posture, which in turn aids circulation, breathing and digestion. Take the time needed to adjust the chair to fit properly. If your child is not sitting properly, look through this manual to see if there are accessories that would help correct the posture or consult your physical therapist. Improper seating can lead to further degeneration. It is vital to consult your child's physical therapist or doctor for more direction.

Three Point Seat Belt and H-Harness Shoulder Straps

The three point seat belt is standard with every Convaid chair (except the adult Compax). Adjust the straps to fit tightly enough to keep them snugly in position. The automotive-type, quick release buckle joins the crotch strap to both sides of the seat belt. The crotch strap should be at a 45° angle to the back when buckled. If not, you may need to adjust seat depth. An optional seat belt is available for the Compax.

To Buckle

Slip in the small metal piece into the black holder with the red button on top.

Fig.6

To Release

Press the red button and pull out the metal piece attached to the fabric strap.



Fig.6

H-harness shoulder straps help the user retain upright trunk and head position. The optional straps adjust by changing the insertion point of your choice. To adjust, insert the strap through the grommet hole in the seat back. Choose the grommet that will keep the user secure but not so tightly that the strap rubs against the face or neck. Grommet choice should be level or higher than top of shoulders. Secure the strap with the threaded knob. **Fig.7**



Fig.7

Fleece-covered shoulder straps are standard with some H-harness straps. Great for extra comfort and are reversible. To reverse covers, open the Velcro® and position over the shoulder straps and then press together. **Fig.8**

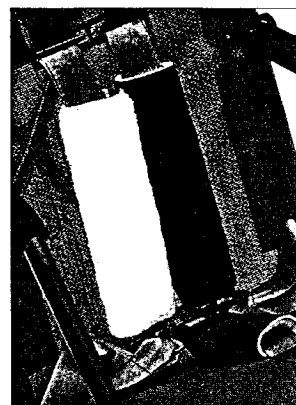


Fig.8

Seat Depth

Measure from the most posterior portion of the buttocks to the back of the knee. Subtract from that measurement 1-2" to allow adequate clearance between the seat and the back of the knee. **Fig.9**

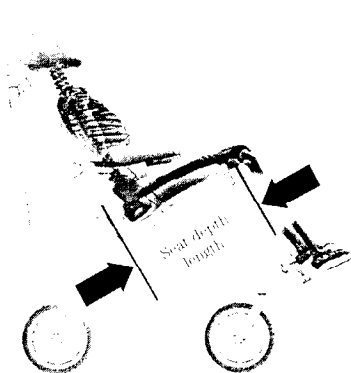


Fig.9

To change seat depth, partially fold the chair to relieve fabric tension. Grasp end of seat tube, depress spring button and move seat tube until spring button relocates into the desired holes. Repeat for the other side of the seat. **Fig.10**

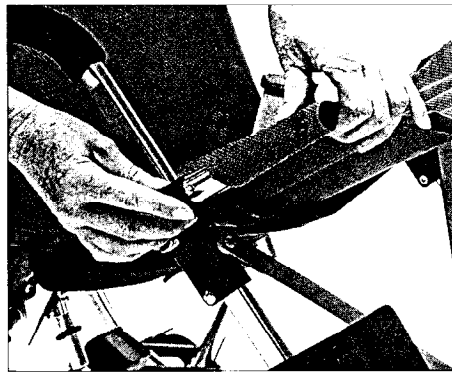


Fig.10



Seat Back Height

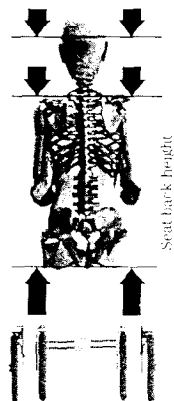


Fig.11

Seat back height varies based on the type of Convaid chair and the seat width of the chair. Seat back extensions are available when needed for extra height to support the head.

For proper seat back height, measure between the seat and the top of the shoulder blades or the upper part of the head. **Fig.11**

Seat Width

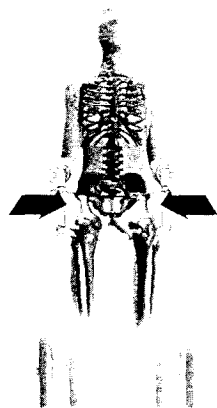


Fig.12

Proper seat width will enable the user to sit comfortably and help prevent problems from developing. While user is seated, measure from hip to hip. **Fig.12**

The user should have enough room to prevent hips and thighs from rubbing against the frame. However, you do not want the chair to be too wide or the user will slide around and their posture will be affected.

The seat width measurement on Convaid Cruisers and Metros is taken on the inside of the armrests. **Fig.13**

For EZ Riders, Compax, Expeditions and Safari Tilt, the measurement is taken on the inside of the chair frame tube. **Fig.14**

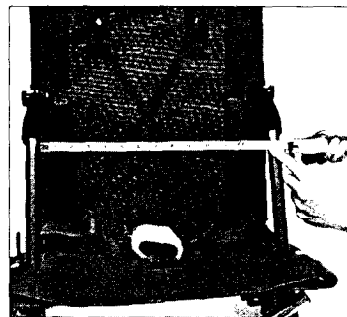


Fig.13



Fig.14

Foot Support Adjustment

Seat-to-footrest height is measured from the back of the knee to the bottom of the heel. Remember, if you have a seat insert cushion, your seat will be 1-2" taller. Feet or heels should rest comfortably on top of foot support plate(s). **Fig.15**

All Convaid foot supports are height adjustable. Based on your type of chair, see appropriate foot support adjustment.

Fig.16-17A

Footplates swing away for access or folding.

For Safari Tilt and Expedition chairs, see separate section.

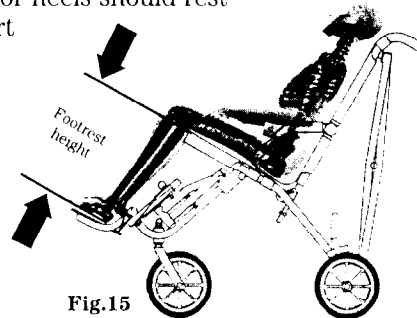


Fig.15

For the Cruiser CR's

Loosen large black plastic knob and slide foot support to desired position. Tighten plastic knob.

If needed, check other footplate for correct height.



Fig.16

For the Cruiser CX's, Compax, and all EZ Riders

To adjust height, pull on ring to remove clevis pin in tube holding footplate. Move footplate up or down to adjust, realign holes and replace pin through holes of tube. See page 6 for increased range.

If needed, check other footplate for correct height.

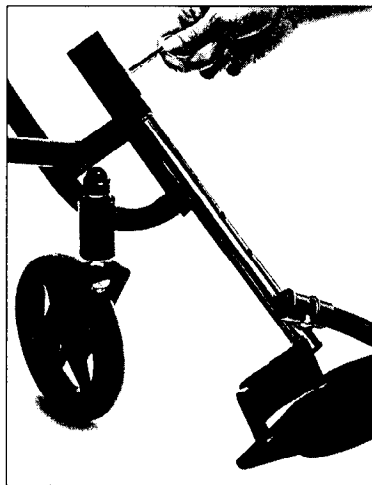


Fig.17

For Metros and C-2000's

Unbolt and slide foot support to desired position.

If needed, check other footplate for correct height.

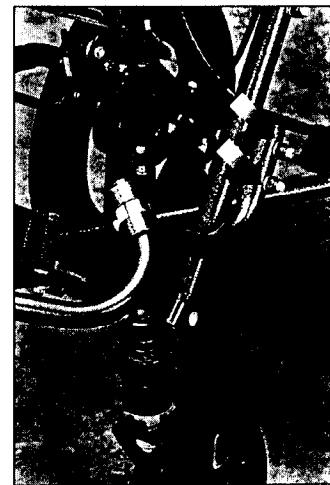


Fig.17A



Footplate Depth Adjustment

All Cruiser CX, EZ Rider, Compax, Safari Tilt and Expedition chairs have footplate depth adjustment for either the one or two piece footplates.

Loosen two nuts located under the footplate using a 7/16" wrench. Slide footplate forward or rearward to desired depth. Retighten nuts. **Fig.18 or Fig.19**

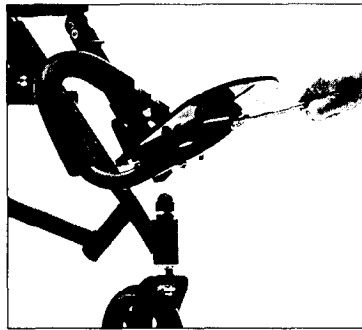


Fig.18 (Two piece)

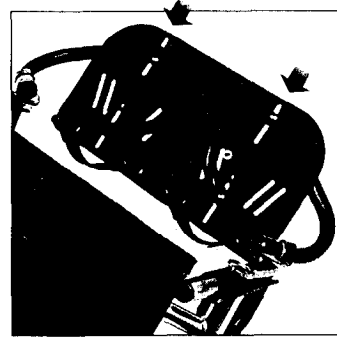


Fig.19 (One piece)

Seat-to-Footplate Height Adjustment

(For Cruiser CX's, Compax and EZ Riders only)

The footplate height can be lengthened or shortened.

Each step can increase the height adjustment range. **Fig.20**

1. Pull out clevis pin and remove the footplate extension tube from the frame. **Fig.21**
2. Use your thumb to press the detent button then pull the footplate assembly apart. **Fig.22**
3. Turn the footplate extension tube around and re-assemble. **Fig.23**

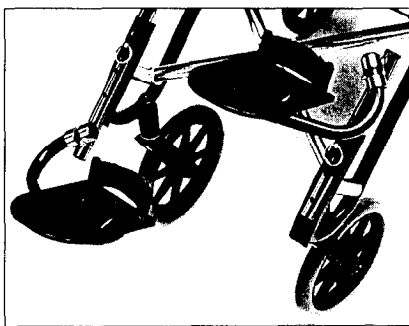


Fig.20



Fig.21

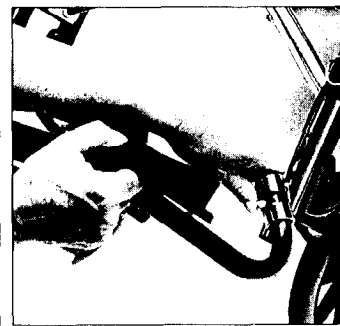


Fig.22

For additional extension:

4. Using a 5/32" hex key or hex wrench, remove both bolts. Turn the adjustment housing bracket the opposite direction and replace bolts. **Fig.24 & 25**
5. Insert the footplate extension tube back into the adjustment housing from the top and secure with clevis pin. **Fig.23**

Note:
If the footplate is still too high, reverse steps #3-4 and insert tube from the bottom. This will give you maximum footplate extension.



Fig.23



Fig.24



Fig.25

Seat-to-Back Angle Adjustment

Depending on level of ability and prescription from your doctor or physical therapist, you may want to adjust the back angle. Changing the back angle can also be used to increase the range of seat depth adjustment.

For Cruisers with back angle adjustment, partially fold chair to relieve fabric tension. Remove grommet and pull fabric rod upwards until it is clear of lower eye bolt connecting the seat and the back tubes. Use a 7/16" wrench and screwdriver (insert screwdriver through the eyebolt to stop it from turning). Remove eyebolt and relocate to one of the other two optional locations. Repeat on other side. **Fig.26**

For Safari Tilts and Expeditions: see separate section for details.

Seat-to-back angle:
85° for lower hole,
90° for middle hole,
95° for upper hole

Note:
Back angle adjustment is only available on Safari Tilt, Expedition, and most Cruiser chairs.



Fig.26



Additional Supports

Convaid offers a wide variety of supports to help properly position most users.

Note: Convaid's chairs provide a semi-contour fit around the body.

It is important the user is fitted snugly into the chair to achieve optimal posture and comfort.

Swing-Away Lateral Support with Scoliosis Strap

Single Flap

Adjustable trunk support stabilizes trunk and maintains midline positioning. Can be pulled to one side for scoliosis correction if used with scoliosis strap. Scoliosis strap comes standard with all trunk supports.

Fig.27

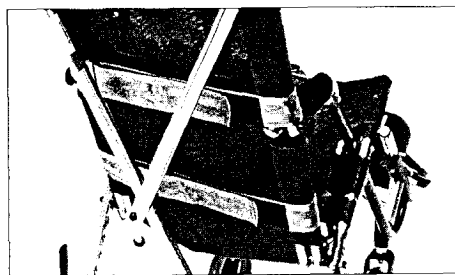
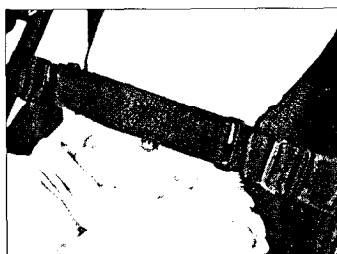


Fig.28

The trunk support is attached to the chair with webbing that wraps around behind the seat back and connects with Velcro straps. **Fig.28**

Support is achieved by pulling each triangular flap toward its appropriate side frame and securing it by wrapping the webbing around the frame and back onto the flap's Velcro backing. For smaller children, the two flaps can be wrapped around the child's torso and joined in the middle. For EZ Rider, wrap webbing around front tubing.

Swing-Away Lateral Support with Scoliosis Strap

Double Flap

One set of triangular flaps locate the midline positioning. The second set of flaps wrap around the child for trunk stabilization. The scoliosis strap can be used to pull to the body to either side. **Fig.29**

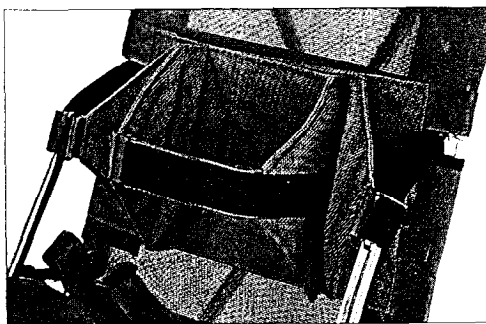


Fig.29

Full Torso Lateral Support

Adjustable support vest keeps user in place comfortably and securely. Helps maintain midline sitting position. Helps prevent forward slumping and assists shoulder retraction. Replaces trunk support and shoulder straps. Trunk vest is attached to the chair with webbing that wraps around behind the seat back and connects with Velcro straps. **Fig.30**

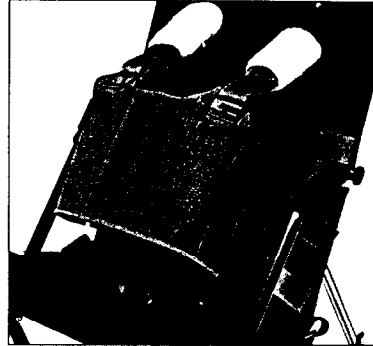


Fig.30

Adductor

Pulls thighs together, improving hip alignment and stabilizing sitting posture. Degree of adduction can be varied and can favor one side. Fold the adductor flaps over the thighs. Wrap the webbing straps under and around the armrest tube, and then press the straps to the Velcro. **Fig.31**

The adductor is attached by the screws at the end of the seat tubes.

For Safari Tilt and Expedition Tilt, attach adductor by Velcro under seat tubes.

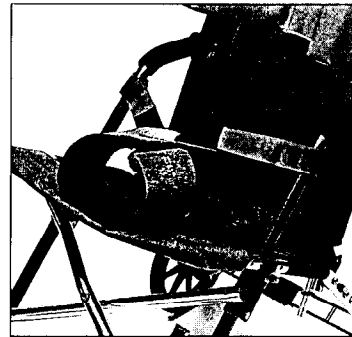


Fig.31

Abductor

Separates thighs for improving hip alignment and stabilizing sitting posture. Degree of abduction can be varied and can favor one side. The abductor flap wraps over the user's thigh from the inside to the outside. The webbing straps and Velcro can either be wrapped around the seat tube or the armrest. They can also be wrapped around the armrest tube twice for high tone children. **Fig.32**

The abductor is attached by the screws at the end of the seat tubes.

For Safari Tilt and Expedition Tilt, attach abductor by Velcro under seat tubes.

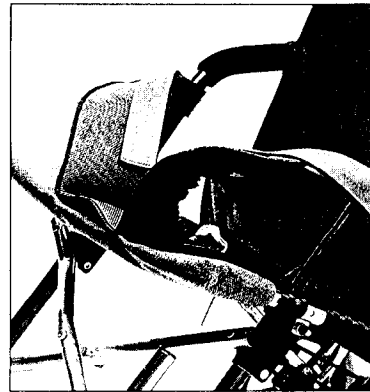


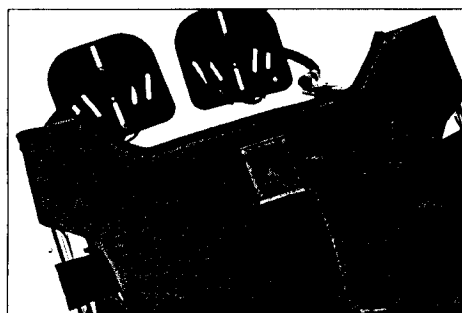
Fig.32



Cut Back Seat -2" (5 cm)

For the smaller child, a 2" cut back seat may help achieve the proper fitting and be more comfortable. Available in standard and reinforced seat. Special order. Not available on the Safari Tilt, Expedition or Metro chairs. **Fig.33**

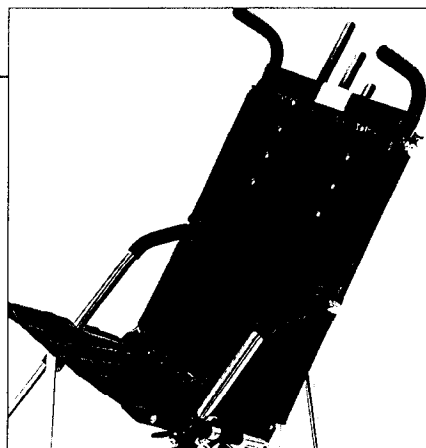
Fig.33



Heavy Duty Seat

Heavy duty, reinforced, padded seat and back comes with pockets which have removable nylon stiffeners. Use when extra firmness is required. Stiffeners easily lift out of pockets for custom-forming with a heat gun. **Fig.34**

Fig.34



Headrest

Adjustable height headrest, sometimes called headwings, provide soft foam support for midline positioning. **Fig.35** The padded insert can be attached at any height by wrapping the webbing and Velcro straps around the frame and securing at the back of the chair. Secure headrest height by tying attached laces to the frame, or headrest extension, or through the grommet holes in the back of the seat fabric. **Fig.36**



Fig.35

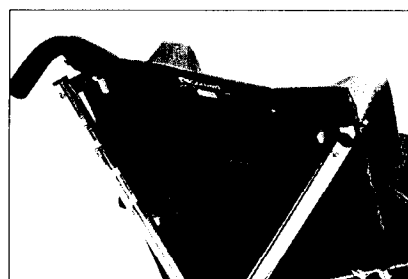


Fig.36

Seat Back Extension

Optional seat back extension fits easily into sockets of seat back. Fold chair slightly. Move rubber grommets to adjust height of seat back extension.

Fig.37 & 38

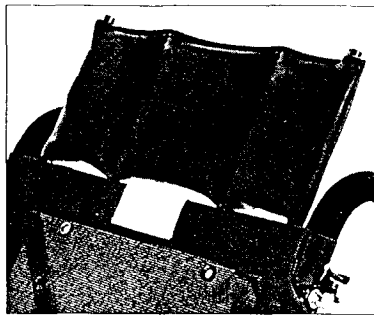


Fig.37

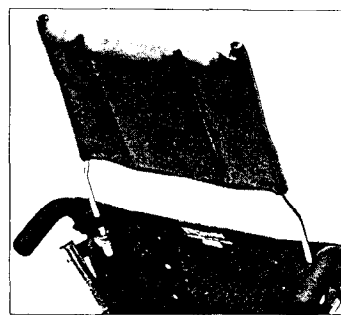


Fig.38

Wedges

Use these foam wedges to modify seating, positioning or correct posture in any of the Convaid chairs. **Fig.39-42**

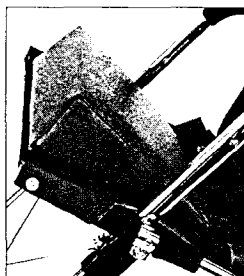


Fig.39

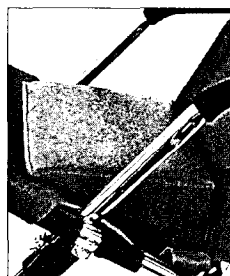


Fig.40

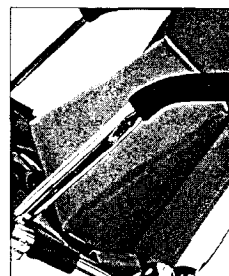


Fig.41



Fig.42

Stabilizing Hat

An attractive hat with Convaid logo attaches to back of seat for head support and control. Acts as a head halter. At the appropriate height, attach strap through grommets on back using knobs supplied. Seat back extension may be required. **Fig.43**



Fig.43



Heel Loops/Ankle Straps

Insert longer side of strap from top to bottom into inside side slit footplate loop, under and up through other side slit. Bolt strap on under side of footplate. **Fig.44-46**

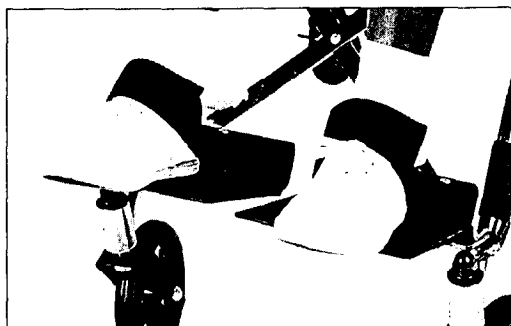


Fig.44

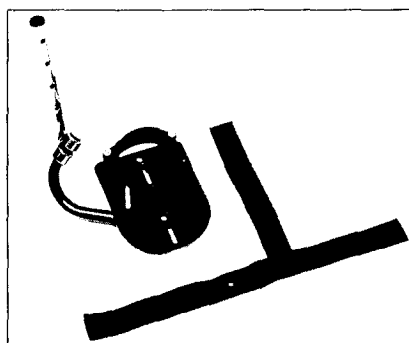


Fig.45

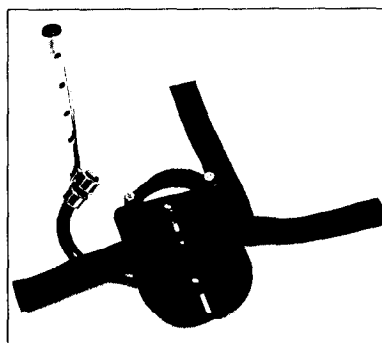


Fig.46

Accessories

Tray

For all Cruisers: see **Fig.47** Tilt up front of tray and insert hook under the eyebolt or the plastic knob as shown. Lower the tray so that the bent portion of the support rod locks over the armrest tube.
For all other chairs see **Fig.48**

For Safari Tilt
(not available
at press time)
For Expedition
Tilt (not available
at press time)

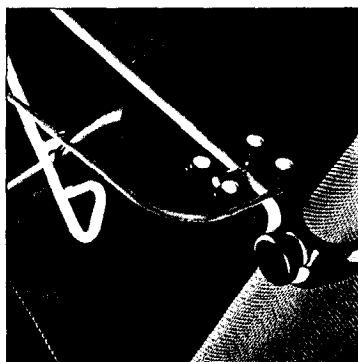


Fig.47

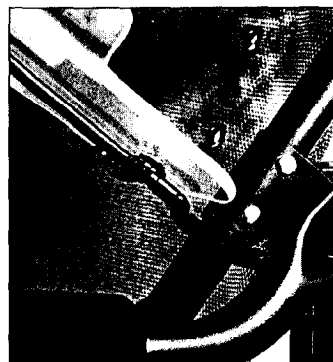
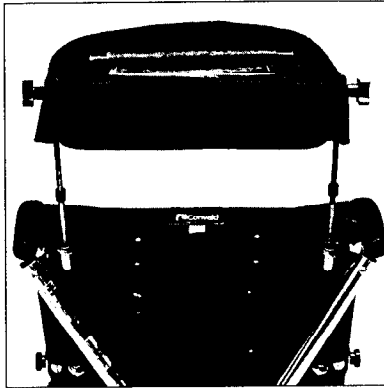


Fig.48

Canopy

Fig.49

Note:
Partially
fold chair
before
assembling
either the
seat back
extension
or canopy.



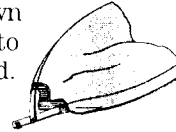
1. Move rubber grommets to adjust height of the seat back extension and/or the canopy.
2. Insert into socket rod. **Fig.49**

Folding canopy:

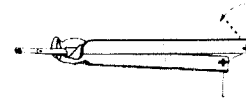
1. Peel back fringe of canopy.



2. Push down on pivot to begin fold.



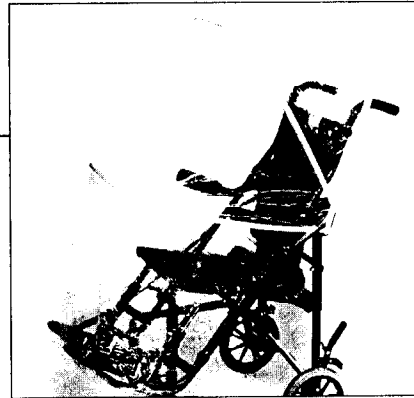
3. Complete fold. Release knob and fold down metal rods.



Rain Cover

Stay dry! Vinyl rain cover easily attaches onto chair by sliding metal piece onto tray knob. **Fig.50**

Fig.50

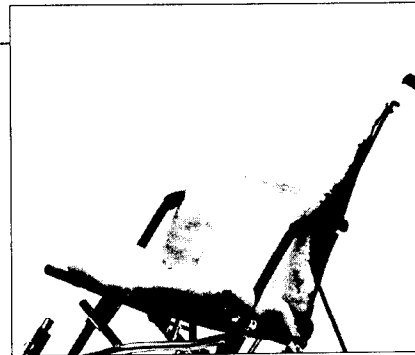


Fleece Pad

Luxurious Australian fleece seat and back cover keeps you warm in winter, cool in the summer. Straps hold seat cover in place on seat tubes and seat back.

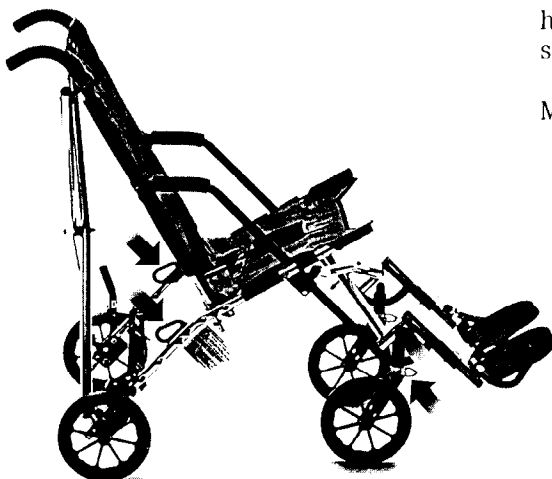
Fig.51

Fig.51





Bus Transport Models



Cruiser, EZ Riders and Metro Bus Transports have been crash-tested and performed satisfactorily at 30MPH/20g deceleration.

Maximum occupant weight:

Cruisers

Model CR11B (4JB)	100lbs / 44.5kg
Model CR13B (4MB)	125lbs / 57kg
Model CX14B (4MXB)	150lbs / 68kg
Model CX16B (4TB)	200lbs / 91kg

EZ Riders

Model EZ14B (174MB)	175lbs / 79.5kg
Model EZ16B (174YB)	175lbs / 79.5kg
Model EZ18B (174TB)	250lbs / 113.5kg

Metro

Model ME14B (3MB)	125lbs / 57kg
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For safety purposes on the Cruiser 13B, 14B and 16B, and the EZ Rider 14B, 16B, and 18B, the seat back extension ***must always*** be used with the chair when being transported by bus or van. The seat back extension is standard with these models.



Caution:
Seat belts
and shoulder
straps from
Convaid are
for positioning
only and are
not to be used
as a vehicular
restraint.

The following instructions should be followed to duplicate test results:

1. Chair must be forward-facing.
2. A tested, proven and compatible (J2249 approved) five point-tie down restraint system must be used, such as Q'Straint* (with positive lock).
3. The tie-down must be securely attached to the four red anchor points on the chair. See arrows in above photo for anchor points.
4. The restraint system must include a lap and shoulder belt, secured directly to the floor and side or roof of the vehicle.
5. All floor tie-down straps must be drawn tight front and back to eliminate any forward/aft movement of the chair.
6. Restraint manufacturer's instructions must be followed precisely.

* Q'Straint **(800) 987-9987**

5553 Ravenswood Road

Ft.Lauderdale, FL 33312

Q'Straint is a company which specializes in crash-tested restraint & tie down systems. Q'Straint is not associated in any way with Convaid Products Inc.

Miscellaneous

Fabric Removal

Partially fold the chair to relieve fabric tension. Remove two screws at end of each seat tube. Completely remove fabric tubes by sliding out of eye bolts.

Fig.53

Lift fabric off seat tubes and from upper handles. On some chairs, the seat reinforcing strap should remain on frame. **Fig.54**

For EZ Riders and Compax, continue the process by removing two coved washers and nuts from top of handle tubes. **Fig.55**

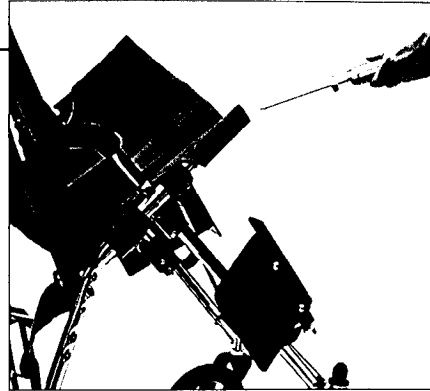


Fig.53

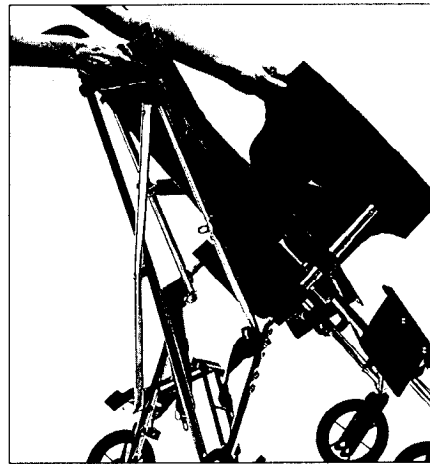


Fig.54

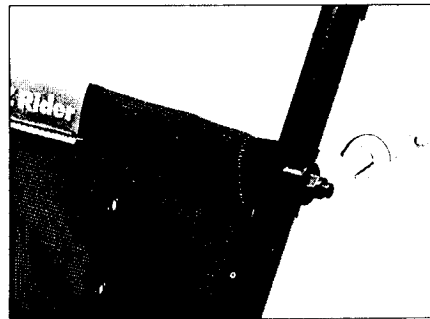


Fig.55



Wheel Locks

Locking and Unlocking

Convaid manufactures two types of wheel locks: handle wheel locks and foot wheel locks. Check to see which type of wheel locks are on your chair. **Fig.56, 57**

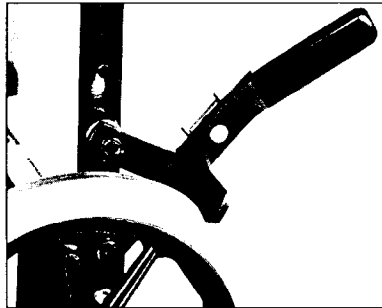


Fig.56 Locked

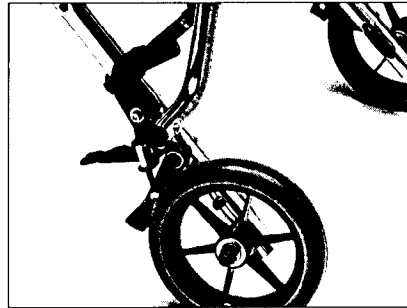


Fig.57 Locked

Handle Wheel Locks:

To lock, pull handle toward rear of chair to apply locks. **Fig.56**

To release, push toward front of chair. **Fig.58** For Expedition, push handle down to lock, pull up to unlock.

Foot Wheel Locks:

Lock by pressing the forward portion of lever with the foot until locked in a positive stop. **Fig.57**

To release lock, use foot to push down the rear of the locking arm. **Fig.59**

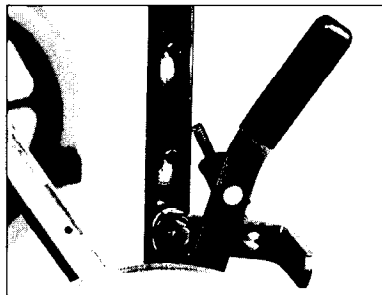


Fig.58 Unlocked

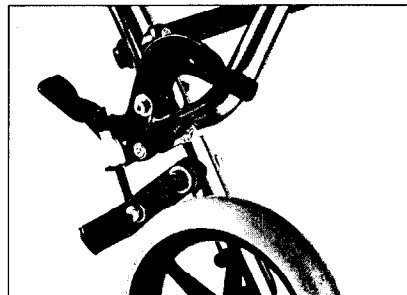


Fig.59 Unlocked

Anti-Shimmy

In the unlikely event that a shimmy should develop in a caster, it can be eliminated by slightly tightening the caster stem nut. Remove plastic cover. Using a 3/4" wrench, turn the caster stem nut clockwise until the shimmy has stopped. **Fig.60**

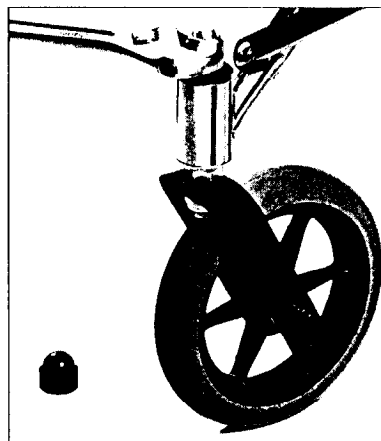


Fig.60

Wheel Lock Adjustment

Set wheel locks in locked position. Push chair with light pressure on the rear wheels. If braked wheel rotates, adjust brake tension by turning the adjustment nut with a 3/8" wrench until wheels no longer rotate while locked. **Fig.61**



Caution: Wheel locks adjustment should be inspected periodically.

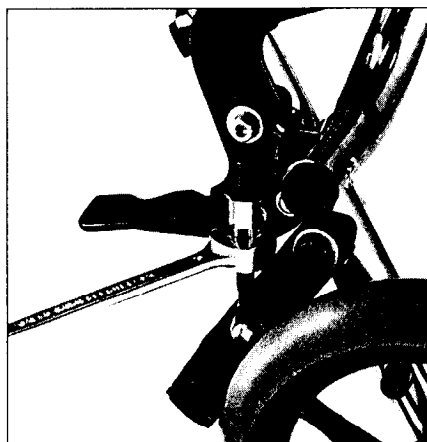


Fig.61



Safari Tilt

Unfolding

1. Pull footrest up until lock is engaged. Stand chair on front casters. Grasp one handle and push down on the opposite seat tube. **Fig.62**
2. Press down firmly on seat tubes to ensure the chair is completely unfolded.
3. Toggle the rear brace into a locked position. **Fig.63**
Swing footrests forward.

CONVAID MODELS

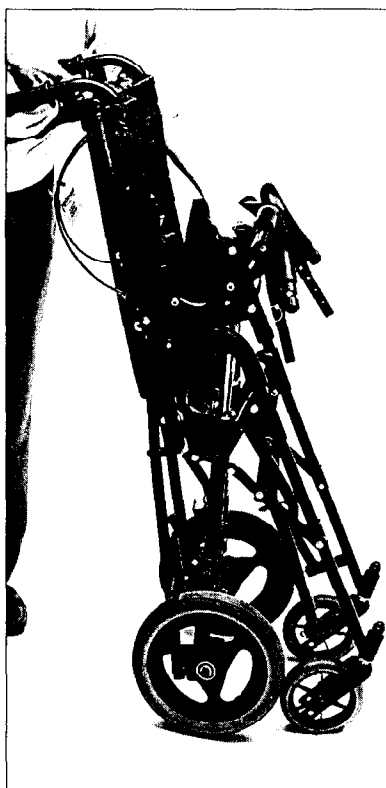


Fig.62



Fig.63

Folding

➡ **IMPORTANT: The Safari Tilt must be fully upright before folding. You may damage the chair if it is not fully upright before folding.**

1. Bring the chair to the most upright position by squeezing both triggers on the handles and tilting the seat forward. Make sure it is in the most upright position. **Fig.64**
2. Remove planar seat insert.
3. Unlock rear brace by pushing up on center of brace with foot. **Fig.65**
4. Swing footrests to the side, grasp one handle and pull up on the center of the seat fabric with the other hand. **Fig.66 and Fig.67**

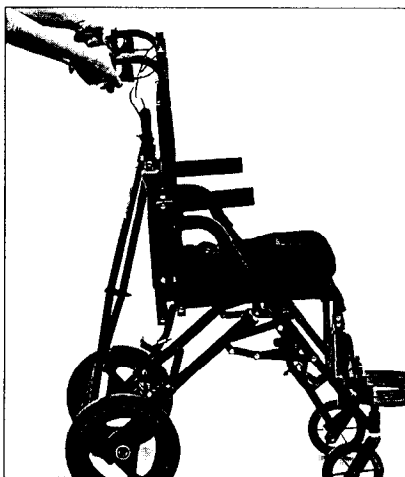


Fig.64

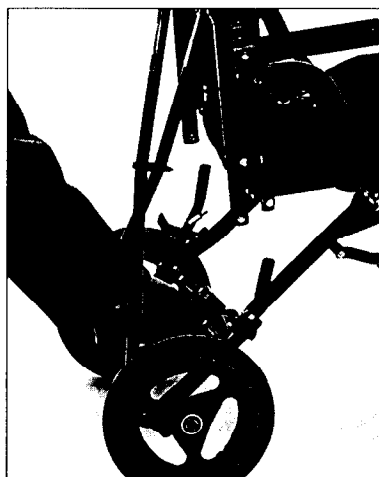


Fig.65



Fig.66

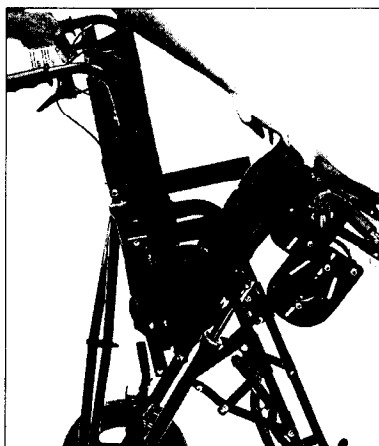


Fig.67



CONVAID USER'S GUIDE

5. Lean chair backwards on rear wheels and push on front legs to complete fold.

Fig.68

For best results, have front casters in trailing position.

Pull down on sliding lock of footrest.

Fold footrest down as shown in **Fig.69**.



Caution:
Keep fingers free of folding mechanism.

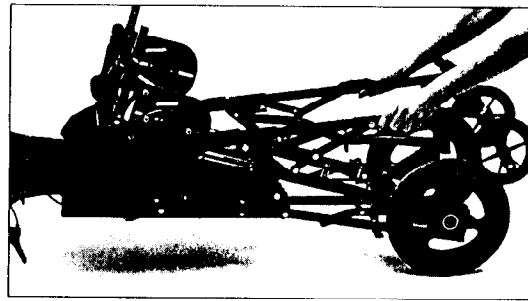


Fig.68

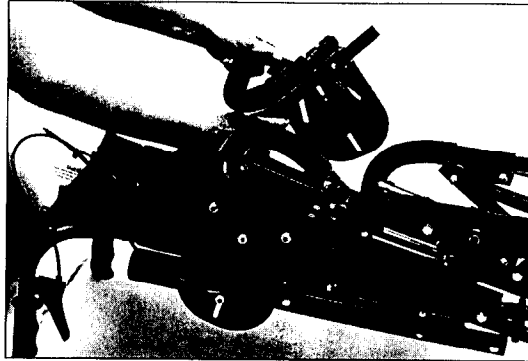


Fig.69

CONVAID MODELS

Tilting

Release lock by squeezing both triggers on handles.

Fig.70

Tilt to desired angle and release triggers.

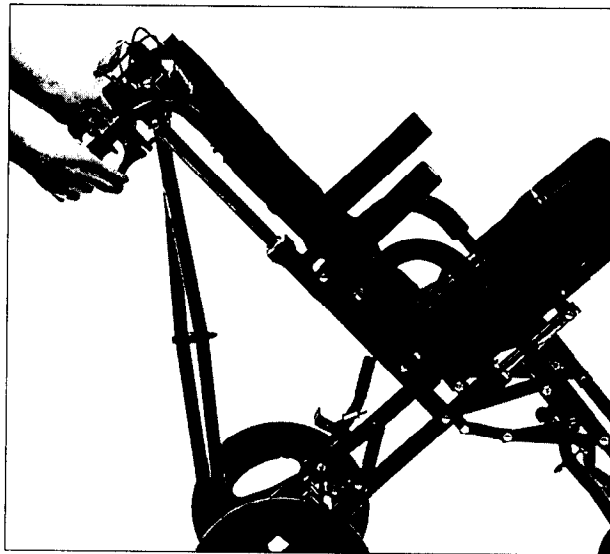


Fig.70

Seat-to-Back Angle Adjustment

Partially fold the chair to relieve fabric tension. To change, use two 7/16" wrenches to remove bolt and remount the seat tube using another hole provided in the seat back tube.
90°-lower hole.
95°-upper hole.

Fig.71

Fig.71



➡ Note: Be sure to replace the bolt, washers and nut in the same order as removed.

Foot Support Adjustment

Pull pin out. Slide foot support to desired height. Push clevis pin into locked position. **Fig.72**

Fig.72



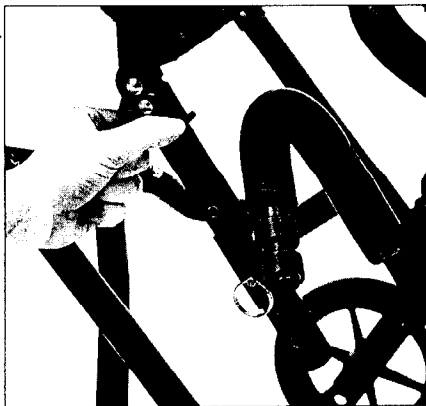
Footrest Adjustment

Two position elevating legrests adjust 90° and 120°.

Pull down on slide lock. Angle legrest to a desired position. Release slide lock. Ensure positive engagement of lock.

Fig.73

Fig.73





Seat Depth Adjustment

Partially fold the chair to relieve fabric tension. Grasp end of seat tube, depress spring button and move seat tube until spring button relocates into one of four other hole locations. Repeat for the other side of seat. **Fig.74**



Fig.74

Armrest Height Adjustment

Adjustable height, pivot armrests are optional on the Safari Tilt Basic and Safari Tilt Anatomical. Safari Tilt "frame only" does not include armrests or legrests.

You can order these separately.

To attach armrest:
Use the existing bolts for attachment. Use two 7/16" wrenches to remove nuts and bolts and reattach with armrests in place. **Fig.75**

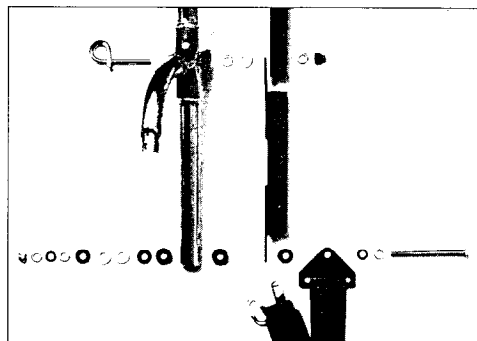


Fig.75

Change height of armrest:
Unbolt using two 7/16" wrenches. Slide armrest up or down and realign to desired hole placement. Rebolt using wrenches. Adjust other side armrest. **Fig.76 & Fig.77**

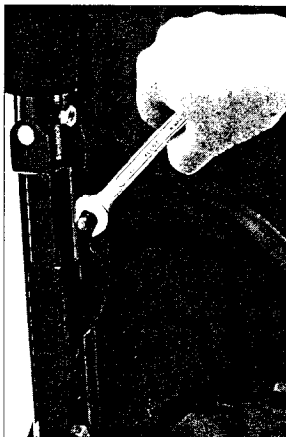


Fig.76

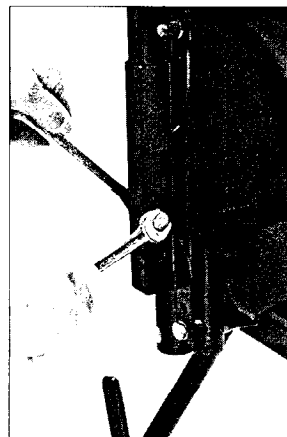


Fig.77

Seat Inserts

Safari Tilt Basic includes an anti-thrust planar seat insert that provides support and holds the pelvis in place. **Fig.78**

For additional support, an optional semi-contour, planar seat insert is available and is standard with the Safari Tilt Anatomical model.

Semi-contour also helps keep the thighs in place. **Fig.79**

For additional seating and positioning systems, call our Customer Service for more information. Toll free 1-888-CONVAID (266-8243)



Fig.78



Fig.79

Anatomical Back Support Frame

Safari Tilt's new anatomical back support frame stabilizes the neck and head in a functional position to assist the development of neck and head righting reflexes.

The anatomical back frame is optional from the factory and must be ordered with the chair.

Removable, reformable splines are standard with the Safari Tilt Anatomical or can be ordered separately. Splines are located inside the fabric seat back and simply pull out. Use a heat gun to customize form.





Expedition Tilt

Unfolding



1. Pull up on handle until chair is open. **Fig.80-81**
2. Move seat back sliders to locked position.
 - Hint: Easier if done before front and rear locks are opened.

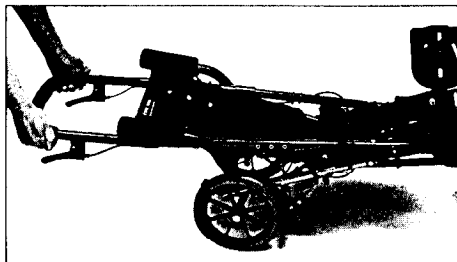


Fig.80

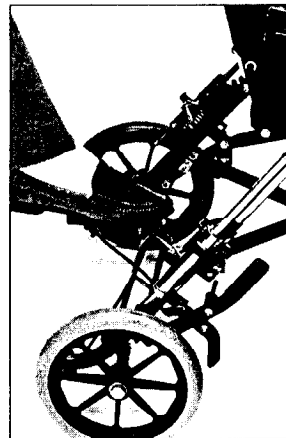


Fig.81

3. Make sure front and rear locks are in locked open positions by pushing down on rear lock, and rearward on front lock with foot. Swing footrests into unfolded position.

Folding

1. Bring the chair to the lowest, most tilted position by squeezing both triggers on the handles and tilting the seat down. **Fig.82**
2. Remove planar seat insert.

Important:
The Expedition must be in lowest tilt position for folding.

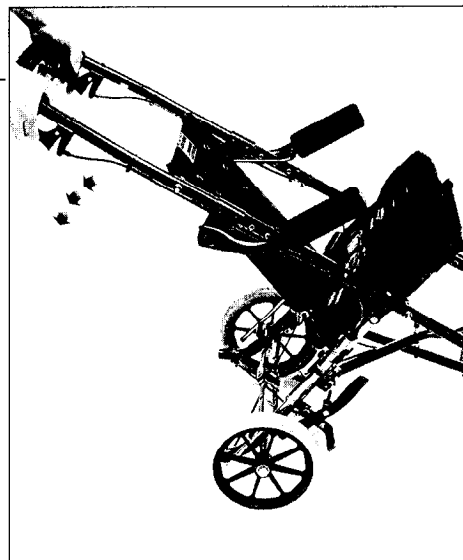


Fig.82

3. Unlock rear brace by pushing up on center of brace with foot.

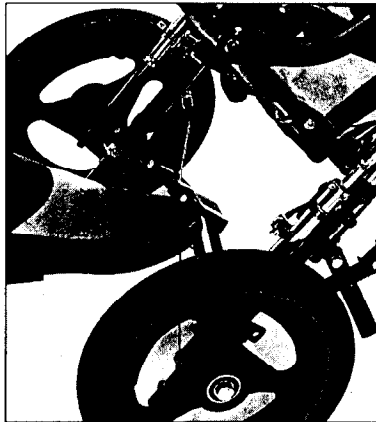
Fig.83

4. Standing in front of chair, unlock front lock by pulling up on safety lock, then pull lock toward you. **Fig.84**

5. Release seat back locks by pushing detent button and pulling sliders toward top of handle until safety wire becomes tight.

Fig.85

➡ Note: Unlock front and rear braces first to relieve fabric tension. **Fig.83 & 84**

**Fig.83****Fig.84**

6. Fold footrest to sides. Push down on handle to fold chair. For best results, have front casters in trailing position.
7. Push down on seat tubes to further fold seat.



Caution:
Keep fingers free of
folding mechanism.

**Fig.85**



Tilting

1. Release lock by squeezing both triggers on handle.
Fig.86
2. Tilt to desired angle and release the triggers.

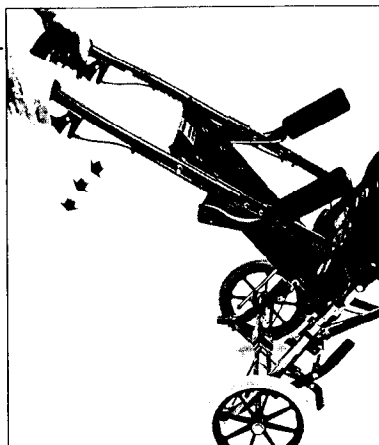


Fig.86

Seat-to-Back Angle Adjustment

Unlock front and rear locks to relieve fabric tension. To change, use two 7/16" wrenches to remove bolt attaching seat back tubes to seat tube and remount the seat tube using another hole provided in the seat back tube. **Fig.87**

- ➡ Note: Be sure to replace the bolt, washers and nut in the same order as removed.

Seat-to-Back Angle

- 85°degrees - lower hole
- 90°degrees - middle hole
- 95°degrees - upper hole

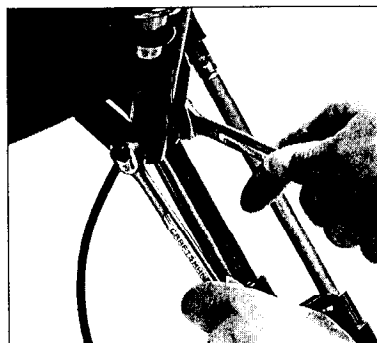


Fig.87

Footplate Height Adjustment

With two 7/16" wrenches remove bolts attaching footplate tubes to frame. Remount footplate tubes at desired height. **Fig.88**

- ➡ Note: Be sure to replace the bolt, washers and nut in the same order as removed.



Fig.88

Seat Depth Adjustment

Unlock front and rear lock braces to relieve fabric tension. Grasp end of seat tube, depress spring button and move seat tube until spring button relocates into one of five other hole locations. Repeat for the other side of seat. **Fig.89**



Fig.89

Armrest Height Adjustment

Adjustable height armrests are available as an option on the Expedition Basic and Expedition Anatomical. Expedition "frame only" does not include armrests or legrests.

To attach armrest: Slide triangle shaped bracket over tubes and attach with four Phillips head screws. Using a 3/8" wrench and a Phillips (Star) screwdriver attach armrest to bracket with remaining hardware. **Fig.90**

➡ Note: For correct clearance, order of washers is important.

To change height of armrest: Unscrew four screws attaching bracket to frame. Slide armrest up or down and realign to desired hole placement. Replace screws, tighten with screwdriver. Adjust other side armrest. **Fig.91**

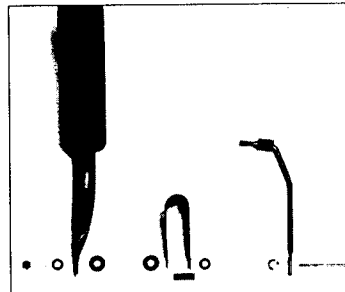


Fig.90

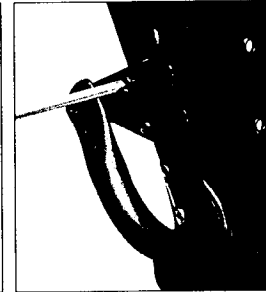


Fig.91

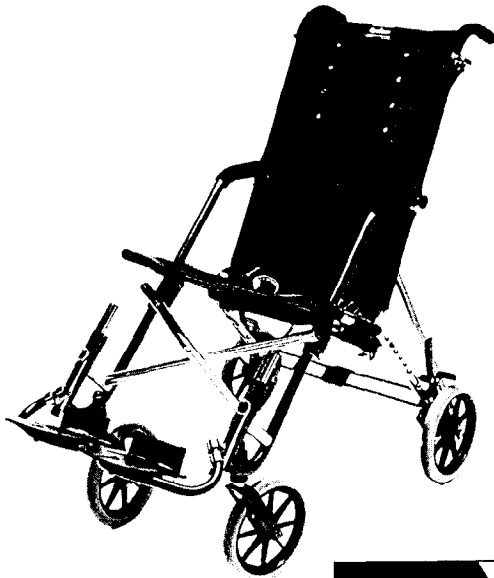
Seat Inserts

Expedition includes an anti-thrust planar seat insert that provides support and holds the pelvis in place. For additional support, an optional semi-contour, planar seat insert is available to also help keep the thighs in place. See page 23 **Figures 78 and 79**. For additional seating and positioning systems, call our Customer Service for more information. Toll free 1-888-CONVAID (266-8243)



Cruiser

- **Cruisers**
- **Cruiser Transports**
- **C-2000**



Folding

1. Unlock rear brace by pushing up on center of brace. **Fig.93**
2. Swing footrests to the side, grasp one handle and pull in the center of the seat fabric or seat tube with other hand. **Fig.94**

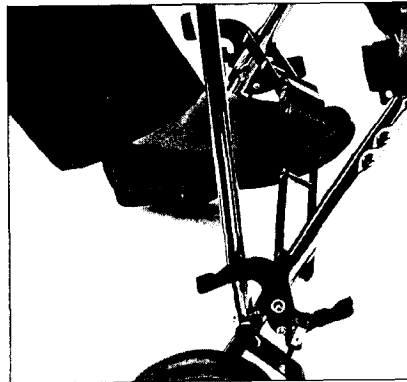


Fig.93

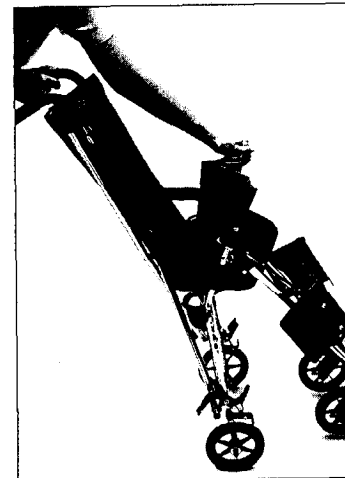


Fig.94

CONVAID MODELS

Caution:
Keep
fingers
free of
folding
mechanism.

3. Lean chair backwards on rear wheels and push on seat tubes or footplates to complete fold. **Fig.95**
If using optional headrest, keep free of handle tubes.

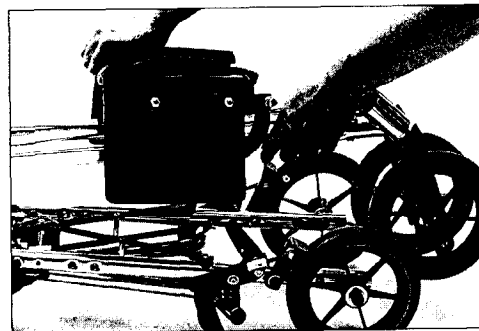


Fig.95

EZ Rider and Compax (adult)

Folding



Caution:
Keep hands clear of moving structure during folding to prevent injury.

1. Unlock by pulling latch toward you. **Fig.96**
2. Push lock down. **Fig.97&98**
3. Grasp one handle and pull up on the center of the seat fabric with the other hand. **Fig.99**



Fig.96



Fig.97



Fig.98



Fig.99

4. Tilt chair back on rear wheels and lay on ground. Weight of chair's wheels will generally complete folding. If stiffness prevents complete folding, press lightly on front legs.

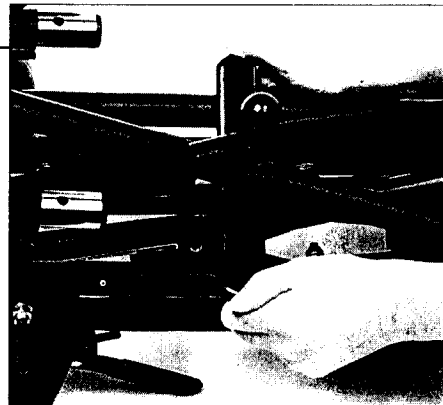
Locking

To keep chair folded, rotate locking bar over front legs. **Fig.100**

Fig.100

Carrying

When carrying or lifting chair, use foam handle near locking bar for easiest balancing results.





Metro

Folding



1. Unlock rear brace by pushing up on center with foot. **Fig.101**
2. Swing footrests to the side, grasp one handle and pull up on the center of the seat fabric with other hand. Footrests are optional. **Fig.102**



Fig.101



Fig.102

3. Lean chair backwards on rear wheels and push on seat tubes or footplates to complete fold. **Fig.103**



Caution: Keep fingers free of folding mechanism.

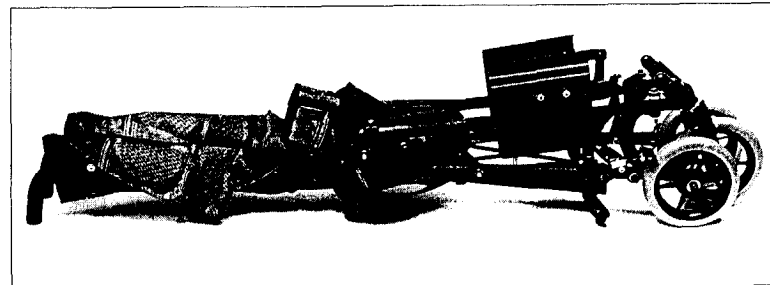


Fig.103

CONVAID MODELS

Consumer Information

The Food and Drug Administration, working with government and private sources concerned with product safety, has developed basic guidelines. These guidelines are strongly recommended by Convaid for the user's and your protection.

IMPORTANT SAFETY INSTRUCTIONS **SAVE THESE INSTRUCTIONS**

When you use our product, basic precautions should always be followed, including the following:

- READ ALL INSTRUCTIONS BEFORE YOU USE OUR PRODUCT.
- ALWAYS FOLLOW THESE SAFETY INSTRUCTIONS.

CAUTION: Do not leave user unattended. Do not strap user too tightly and do not allow straps to interfere with breathing or circulation. Always apply wheel locks before letting go of the chair.



CURB WARNING

To prevent user from being thrown forward in chair:

- Go down curb or step rear wheels first, making sure that the child is square to curb so that the rear wheels go down together.
- Go up curb frontwards with both front wheels up together.
- Avoid going up multiple steps with user in chair.
- Avoid using escalators. Use the elevator.

MAINTENANCE AFTER EXPOSURE TO SALT WATER

Exposure to salt water should be avoided. However, if this chair is used in conditions where salt water is present, such as on salted roads in winter or in coastal areas, corrosion may occur. To prevent corrosion, after each exposure, the frame should be washed with clean water, dried and household oil reapplied to the moving parts.

MAINTENANCE

If any part becomes too stiff to fold or operate, the use of household oil should return it to normal operation. Wheels and wheel locks should be kept free of mud, so as not to interfere with braking. Keep metal frame clean and dry to avoid corrosion. Fabric seat and attachments can be easily removed, washed and air dried.

LIMITED LIFETIME WARRANTY

Convaid warrants to the original retail purchaser of the Convaid product, that if any part thereof proves functionally defective in material or workmanship within the specified warranty period, such defective part will be repaired or replaced (at Convaid's option) free of charge. Warranty service may be performed by an authorized service center or (at Convaid's discretion) the factory.

Warranty Period

Frame & X-Braces Lifetime of original retail buyer (except on Metros and C-2000s).
Metros & C-2000 Frame & X-Braces.....Five years
Other components.....One year
Fabric & webbing One year

This warranty does not cover normal wear and tear, or damage caused by accident or misuse.

To exercise this limited warranty, the user should first obtain a Return Authorization Number from Convaid's customer service. The product must be delivered charges pre-paid (UPS recommended) to the factory or to an authorized service center, together with a copy of the original invoice, the Return Authorization Number and a written description of the problem.

THIS LIMITED WARRANTY EXCLUDES ANY CLAIM FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. ANY IMPLIED WARRANTY APPLICABLE IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS. SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE THEREOF.

This warranty gives you specific legal rights and you may have other rights that vary from state to state.

FAST FACTORY SERVICE: If being without your chair creates a hardship, you may wish to take advantage of our Fast Factory Service, whether under warranty or not.

WARRANTY REPAIR: Simply send your chair to our factory by UPS Next Day Air (prepaid). We will fix it and ship it out the next day by UPS Next Day Air at our expense.

NON-WARRANTY REPAIR: Same as above except no proof of purchase is required. The time to repair and ship back to you will be extended by the time it takes us to reach you for approval of estimated repair costs

The CE Mark Authorized Representative is Medical Specialties Ltd, Blackburn BB2 4HT UK



 **Convaid**

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E-Z-ON PRODUCTS, Inc. of Florida

605 Commerce Way
Jupiter, FL 33458

<http://www.ezonpro.com>

Phone: Customer service (800) 323-6598 Fax: (561) 747-8779 E-mail: Info@ezonpro.com
Other (561) 747-6920

Product family at a glance for clinicians: Vest

Popular name for device	Model/Order #	Useful for which diagnoses?
E-Z-ON modified vest	101m2-need size	cast spinal injury (supine, prone, lateral leg injuries)
E-Z-ON adjustable	103z specify size and mount	children over age 2 who have outgrown carseat, behavior problem
E-Z-ON standard	101 specify size and mount	same as above
Universal Harness	86Y	3 point seatbelt age 4-adult

Infection control protocols or warranties available? Yes If yes, description attached? Yes, washing instructions sewn into vest

History of Medicaid/insurance/state disability purchases for individuals? Yes If yes, roll call of states attached? No. Prescription only

Product specifications at a glance for clinicians: Safety, Support; Restraint

Device name	Height/Length ranges	Weight ranges	Recline ranges/options	RF range	FF range	Accessories for positioning
E-Z-ON modified	limited see instructions	age 2-12 yrs 20-100 lbs.	supine, prone, lateral	NO	yes, lateral	pillows, extremity belt
E-Z-ON adjustable	Not Applicable	age 2 years 20-164 lbs.	45 degrees	NO	Yes	crotch strap, wrist/ankle restraint
E-Z-ON standard	Not Applicable	age 2 years 20-164 lbs.	45 degrees	NO	Yes	crotch strap, wrist/ankle restraint
Universal Harness 86Y	minimum age 4 years	age 4 years to adult	NO	NO	YES	None

Product installation specifications at a glance for clinicians:

Appropriate vehicle environments: (check any that apply)

☒ Cars, vans, pickups ☒ School buses ☒ Ambulances ☐ Other (specify):

Product name	Tether needs/ Cam wrap needs	Tether/cam kits standard?	Installation assessment alerts
E-Z-ON modified vest	NO	NO	must have 2 seatbelts. Child must be able to lay down without head/feet touching sides of car.
E-Z-ON adjustable vest	YES	YES	need waist measurement and vehicle seat requirements to determine mounting device needed. Note: The 103Z small and extra small vest will meet the new FMVSS 213-225.
E-Z-ON standard vest	YES	YES	same as EZ-ON adjustable
Universal Harness	Tether YES Cam NO	Tether YES	tether is integrated part of harness. Use vehicles seatbelt. Low back booster seat can be used. Belt must go on child.

Price range categories:**Purchasing programs for professionals or community programs:**

Product name	Under \$50	\$51 – \$200	\$201 – \$500	\$501 – over
E-Z-ON modified		X		
E-Z-ON adjustable		X		
E-Z-ON standard		X		
Universal Harness		X		

Other manufacturer comments regarding issues for medical/disability clinicians and safety specialists?



E-Z-ON PRODUCTS, INC. OF FLORIDA

605 Commerce Way West • Jupiter, FL 33458 • Phone: (561) 747-6920 • Fax (561) 747-8779

Installation and Usage Instructions for the E-Z-ON™ VEST in School Buses and Vans with Stationary Seat Backs

WARNING

Failure to follow the manufacturer's instructions can result in child striking the vehicle's interior during a sudden stop or collision.

- This E-Z-ON™ VEST is designed for children who weigh between **20-160 lbs.**
- The E-Z-ON™ VEST must be used with a seat or floor mount as specified in the manufacturer's installation and usage instructions.
- The E-Z-ON™ VEST must be adjusted snugly around the child.
- Include the installation and usage instructions if the E-Z-ON™ VEST is given to a friend or donated to an organization.

Call for additional free copies of these instructions (1-800-323-6598).

HOW TO REGISTER YOUR CHILD RESTRAINT

Child Restraints could be recalled for safety reasons. You must register this restraint in order to be notified of a recall. Fill out the Registration Card enclosed with your E-Z-ON™ VEST or send your name, address and the restraint's model number and manufacturing date to E-Z-ON Products, Inc. of Florida, 605 Commerce Way West, Jupiter, Florida 33458 or call 1 (800) 323-6598. For recall information, call the U.S. Government Auto Safety Hotline at 1 (800) 424-9393. In the Washington D.C. area call (202) 366-0123.

Mounting the E-Z-ON™ VEST

This E-Z-ON™ Vest must be used with one of the following mounting systems:

- **Seat Mounts** - Seat mounts anchor the vest to a stationary seat back with a "wrap around" strap.
- **Floor Mounts** - Floor mounts anchor the vest to the vehicle floor.

Installation of the Seat Mount

- Locate and identify the push button strap (Strap A), the connector strap (Strap B), and the inside strap (Strap C). **See Diagram B.**
- Place Strap A over the top of the seat so that the push button of the buckle faces the back of the seat.
- Place Strap B between the seat cushions, and attach to the D-Rings on the hip strap of the E-Z-ON Vest™. The snap hooks should protrude just enough to attach to the D-Rings.
- Strap C should be flat against the inside of the seat **See Diagram A.**
- Attach the snap hooks on Strap A to the metal hardware on the shoulder straps of the E-Z-ON VEST.™
- Attach the buckle of Strap A and the connector of Strap B together.
- After securing both ends, pull the loose end of Strap B as **tightly** as possible.
- Make sure the push button of the buckle faces the back of the seat to help prevent accidental release. **See Diagram B.**

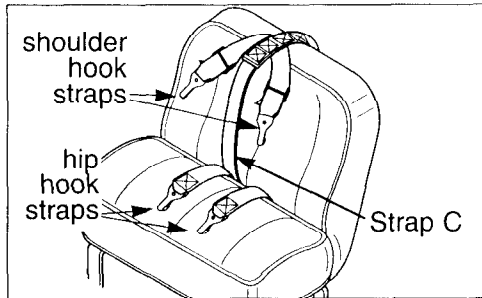


Diagram A
Seat Mount - Front View

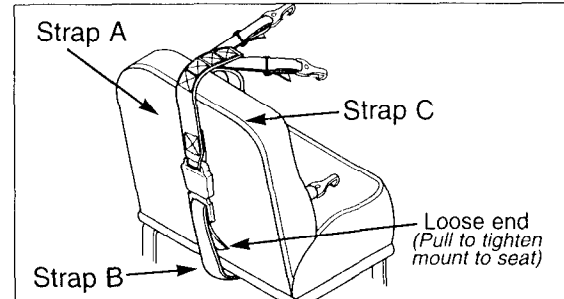
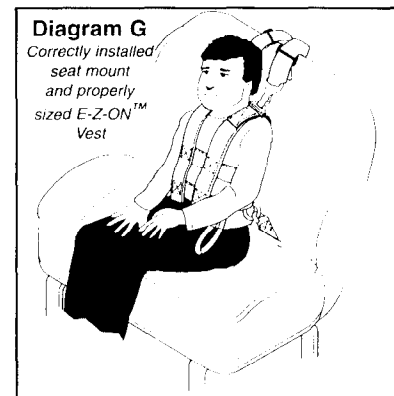
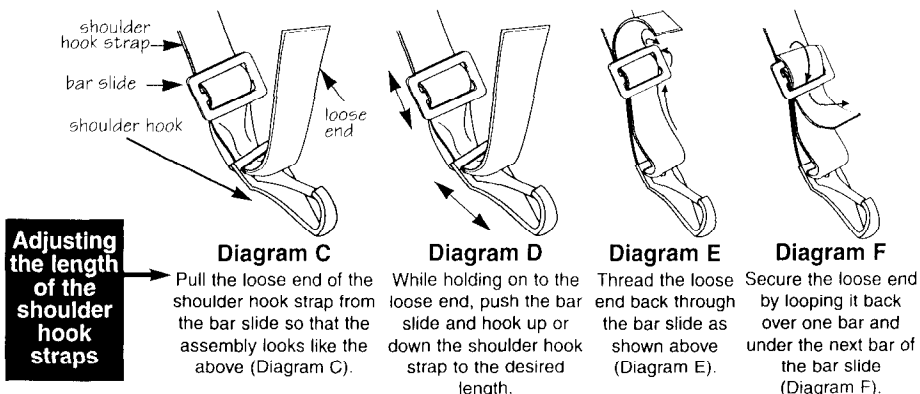


Diagram B
Seat Mount - Back view

Positioning the Passenger and Connecting the Vest to the Seat Mount

- Place the E-Z-ON™ Vest on the child according to the instructions found on page 4, "Placing the E-Z-ON Vest on the Child".
- Position the person wearing the E-Z-ON™ Vest on the vehicle seat with buttocks and shoulders touching the seat back.
- Locate the two snap hooks of Strap A. Attach each to the metal hardware located on the shoulder of the E-Z-ON™ Vest.
- Locate the two snap hooks of Strap B. Attach each to a hip D-Ring on the E-Z-ON™ Vest.
- If there is an existing lap belt in the vehicle: thread the vehicle's lap belt through the loops located on each side of the vest. Secure the seat belt snugly around the child's hip area.
- Check to make sure that all hooks and buckles are secure and the straps have no slack. The length of the shoulder hook straps may have to be adjusted to eliminate slack or if they are too short to reach the hardware (**see Diagrams C, D, E & F**). If the seat mount is correctly installed and the E-Z-ON™ Vest is properly sized, the torso will be securely supported in an upright position. **See Diagram G.**

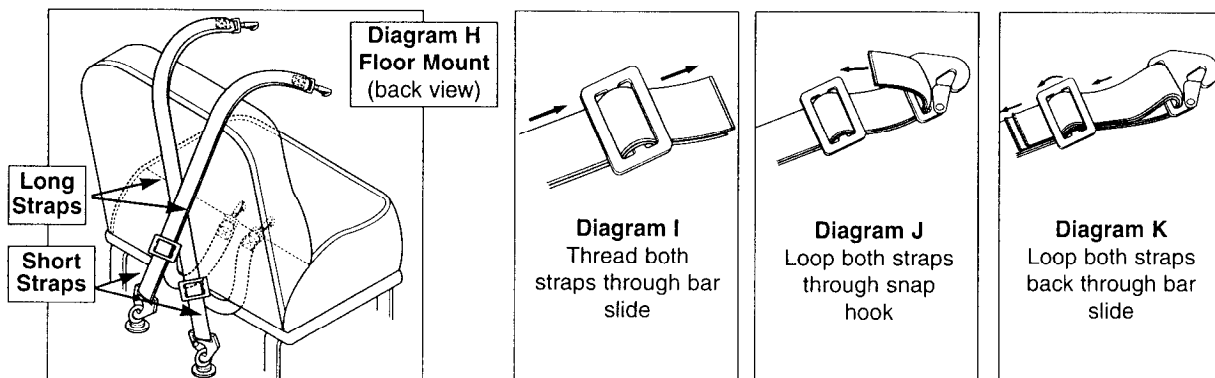


For further information or to place an order, call **1-800-323-6598**

Installation of the Floor Mount

The floor mount requires two eyebolts anchored to two permanent eyebolt holes in the floor of the vehicle. If the vehicle does not have eyebolt holes, holes for two 7/16" eyebolts must be drilled at least 12" apart.

- Standing behind the seat, cross the long straps and place them over the top of the seat with the two snap hooks at shoulder height. **See Diagram H.**
- Place the short straps through the seat cushions, making sure that the two snap hooks are protruding enough to reach the hips of the passenger.
- **To attach the barslide and large 2" snap hook:**
Take the free ends of one long strap and one short strap, and thread them through the two slots of one of the barslides. Push the barslide about 12" above the ends of the straps. Thread the ends of the straps through the open end of the large 2" snap hook and back again through the two slots of the barslide. The snap hook should be securely attached to the strap. **See Diagram I, J, K.**
- Adjust the position of the barslide making sure that the strap is just long enough to reach the opposite eyebolt. Cross the long straps and fasten the large 2" snap hook into the eyebolt. **See Diagram H.**
- Repeat the same procedure with the remaining long and short straps. After the straps are secured to the eyebolts, check to see that the barslides and large 2" snap hooks are correctly installed by grasping the part of the straps that lay over the top of the seat and pulling upward. The straps should remain taut with no slippage.



Positioning the Passenger and Connecting the Vest to the Floor Mount



Diagram L
E-Z-ON™ Vest with
Floor Mount

- Place the E-Z-ON™ Vest on the child according to the manufacturer's instructions as found on the last page of these instructions.
- Position the person wearing the E-Z-ON™ Vest on the vehicle seat with buttocks and shoulders touching the seat back.
- Locate the snap hooks on the long straps. (The long straps lay over the seat back.) Attach each snap hook to a shoulder D-ring.
- Locate the two snap hooks on the short straps. (The short straps should be pulled through the seat cushions). Attach each snap hook to a hip D-ring. **See Diagram L.**
- If there is an existing lap belt in the vehicle: thread the vehicle's lap belt through the loops located on each side of the vest. Secure the seat belt snugly around the child's hip area.
- If the seat mount is correctly installed and the E-Z-ON™ Vest is properly sized, the torso will be securely supported in an upright position. Check to make sure that all hooks and barslides are secure.

For further information or to place an order, call **1-800-323-6598**

Placing the E-Z-ON™ Vest on the Child



Parachute emblem in front

- Place the vest on the child with the parachute emblem in the front and secure all closures.
- The E-Z-ON™ VEST has one of the following closures:

- Back Zipper Closure
- Front Push Button Buckle Closures
- Back Velcro Closure
- Front Buckle Ring Closure

The Buckle Rings and Push Button Buckle closures must always be in the front. Zipper or Velcro closures must always be in the back.

- The E-Z-ON™ VEST should fit snugly on the child. (For vests with multiple zipper closures - choose the zipper closure that fits the child securely.) If the E-Z-ON™ VEST is too tight, the child will not be comfortable. If it is too loose, the child will not be secure.

If you are using the adjustable E-Z-ON™ Vest (Model No. 103z), follow these additional instructions:

Adjust the shoulder straps (see diagram M):

- Open the velcro closure on the sherpa fleece shoulder pads.
- Adjust the strap by unthreading the loose end from the black barslide and pulling it until the shoulder strap fits snugly over the shoulder.
- Do not pull the vest too far up. The lower hip strap of the E-Z-ON™ Vest must remain low around the lap.
- Thread the loose end of each web strap back through the barslides on each shoulder and lock into place.
- Close the velcro on the sherpa shoulder pads with metal adjuster completely covered.

Connect the vest to the mount:

Have the child sit on the vehicle seat (a booster seat may be used for small children).

The adjustable E-Z-ON™ Vest hooks up to the Seat Mounts the same way the other E-Z-ON™ Vests do, with one small difference...instead of hooking the mount to the metal rings on the shoulder of the vest, hook the mount to the slot on top of the metal adjuster on the shoulder straps (**see diagrams M and N**). All other hook-up procedures are the same as detailed in the previous instructions (see "Positioning the "Passenger and Connecting the Vest to the Seat Mount" or Positioning the Passenger and Connecting the Vest to the Floor Mount").

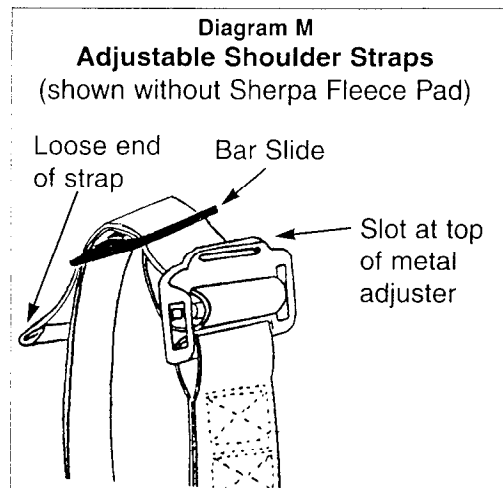


Diagram N

For further information or to place an order, call **1-800-323-6598**



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Installation and Usage Instructions for the E-Z-ON™ VEST in the Family Vehicle

WARNING

Failure to follow the manufacturer's instructions can result in child striking the vehicle's interior during a sudden stop or collision.

- This E-Z-ON™ VEST is designed for children and adults who weigh between **20-160 lbs.**
- The child's head should not be higher than the top of the seat back.
- The E-Z-ON™ VEST must be secured with a vehicle belt as specified in the manufacturer's installation and usage instructions.
- The vest must be adjusted snugly around your child.
- Make sure to secure the top tether strap provided with the E-Z-ON™ VEST.
- Include the installation and usage instructions if the E-Z-ON™ VEST is given to a friend or donated to an organization.

Call for additional free copies of these instructions (1-800-323-6598).

HOW TO REGISTER YOUR CHILD RESTRAINT

Child Restraints could be recalled for safety reasons. You must register this restraint in order to be notified of a recall. Fill out the Registration Card enclosed with your E-Z-ON™ VEST or send your name, address and the restraint's model number and manufacturing date to E-Z-ON™ Products, Inc. of Florida, 605 Commerce Way West, Jupiter, Florida 33458 or call 1 (800) 323-6598. For recall information, call the U.S. Government Auto Safety Hotline at 1 (800) 424-9393. In the Washington D.C. area call (202) 366-0123.

Anchoring the Tether Strap to the Family Vehicle

Some automobiles have pre-drilled anchor locations for the tether strap. If your vehicle does not have pre-drilled anchor locations, consult your automobile dealer or qualified mechanic. The tether strap is permanently bolted to your vehicle and should be located in one of the following locations:

- 1.) behind the rear seat in the trunk or luggage space;
- 2.) behind the rear seat in the rear window panel;
- 3.) behind the front seat on the vehicle floor.

NOTE: The rear center seating position is the safest seating position in most vehicles for installing a child restraint system.

Back Seat Usage - Trunk or Luggage Space Installation

- Have your auto dealer or mechanic determine the correct distance for an anchor location behind the seat so that the tether strap will be attached at a maximum 45° angle. (See Diagram A).
- A 7/16" hole should be drilled in the selected location.
- Use anchoring hardware to bolt the tether strap permanently to your vehicle. (Anchoring hardware is included.) (See Diagram B). We recommend using a sealant around the drilled hole.
- Extend the tether strap over the top of the seat and snugly adjust the strap. Lock into place by threading it through the barslide. (See Diagram C).

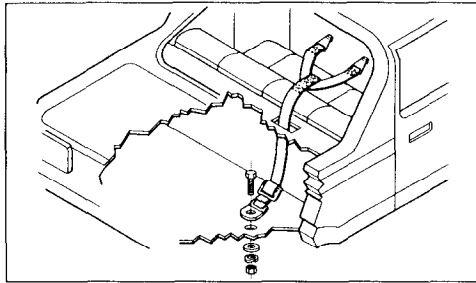


Diagram A
Trunk/Luggage Space Installation

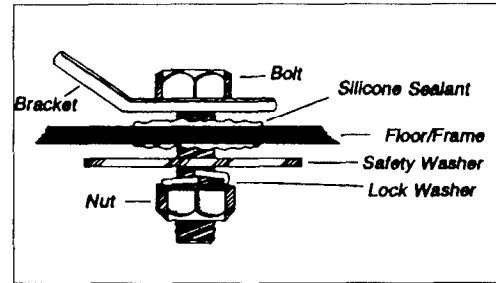


Diagram B
Anchoring Hardware

Back Seat Usage - Rear Window Panel Installation

- Have your auto dealer or mechanic determine the correct distance for an anchor location in the rear window panel. (See Diagram D).
- A 7/16" hole should be drilled in the selected location.
- Use anchoring hardware to bolt the tether strap permanently to your vehicle. (Anchoring hardware is included.) (See Diagram B). We recommend using a sealant around the drilled hole.
- Extend the tether strap over the top of the seat and snugly adjust the strap. Lock into place by threading it through the barslide. (See Diagram C).

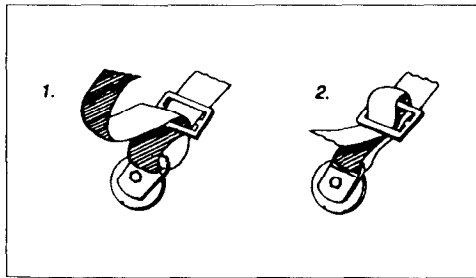


Diagram C
Use of Bar Slide

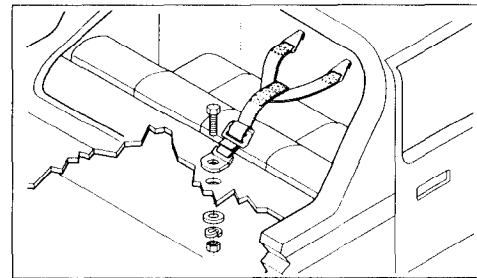


Diagram D
Rear Window Panel Installation

For further information or to place an order, call **1-800-323-6598**



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Front Seat Usage - Behind Front Seat Installation

CAUTION

E-Z-ON™ PRODUCTS, INC. of Florida recommends that front seat installation be used only when the vehicle does not allow for a rear seat installation or when a physical disability requires the child to be placed in the front seat.

- Have your auto dealer or mechanic determine the correct distance for an anchor location on the vehicle floor behind the front seat at a maximum angle of 45°. (See Diagram E).
- A 7/16" hole should be drilled in the selected location.
- Use anchoring hardware to bolt the tether strap permanently to your vehicle. (Anchoring hardware is included.) (See Diagram B). We recommend using a sealant around the drilled hole.
- Extend the tether strap over the top of the seat and snugly adjust the strap. Lock into place by threading it through the barslide. (See Diagram C).

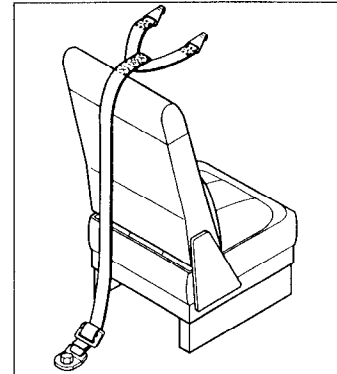


Diagram E
Behind Front Seat Installation

Use of the Locking Clip with Vehicle's Shoulder-Lap Belt

The Locking Clip should be used with a shoulder-lap belt combination where the male latch plate slides freely.

Usage:

- Put E-Z-ON™ Vest on child per manufacturer's instructions.
- Identify the male latch plate portion of your vehicle's Shoulder-Lap Belt. (See Diagram F).
- Hold together the shoulder belt portion and lap belt portion. (See Diagram G). Thread webbing into Locking Clip one side at a time. (See Diagram H).
- Move Locking Clip as close as possible to the male latch plate. (See Diagram I).
- Thread shoulder lap belt through lower loops of E-Z-ON™ Vest. (See Diagram J).
- Snap male latch plate into buckle. Make sure that all slack is out of the lap belt. (See Diagram K).

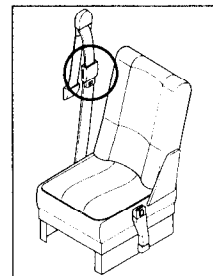


Diagram F

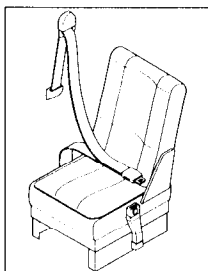


Diagram G

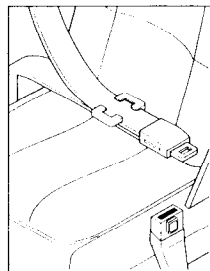


Diagram H

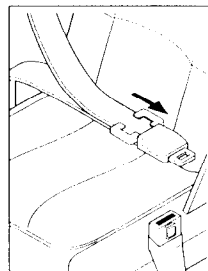


Diagram I

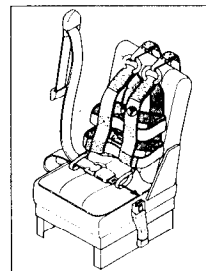


Diagram J

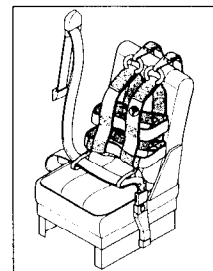


Diagram K

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Placing the Vest on the Child

The E-Z-ON™ VEST is placed on the child with the parachute emblem in the front. (See Diagram K). The E-Z-ON™ VEST has one of the following closures:

- Back Zipper Closure
- Back Velcro Closure
- Front Push Button Buckle Closures
- Front Buckle Ring Closure



Diagram K
Parachute emblem in front

The Buckle Rings and Push Button Buckle closures must always be in the front. Zipper or Velcro closures must always be in the back.

- Place the vest on the child and secure all closures. The E-Z-ON™ VEST should fit snugly on the child. (For vests with multiple zipper closures - choose the zipper closure that fits the child securely.) If the E-Z-ON™ VEST is too tight, the child will not be comfortable. If it is too loose, the child will not be secure.

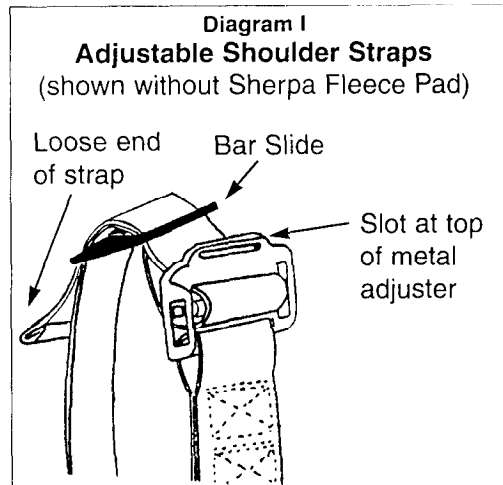
- Have the child sit on the vehicle seat (a booster seat may be used for small children.) Attach the tether strap to the E-Z-ON™ VEST by attaching the two snap hooks on the tether strap to the rings located on the shoulders of the E-Z-ON™ VEST.

- Thread the seat belt in your vehicle through the web loops on the bottom of each side of the E-Z-ON™ VEST. The seat belt should fit snugly across the lap area.

If you are using the adjustable E-Z-ON™ Vest (Model No. 103z), follow these additional instructions:

Adjust the shoulder straps (see diagram I):

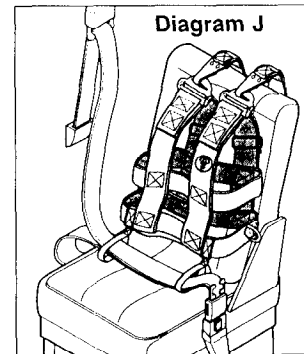
- Open the velcro closure on the sherpa fleece shoulder pads.
- Adjust the strap by unthreading the loose end from the black barslide and pulling it until the shoulder strap fits snugly over the shoulder.
- Do not pull the vest too far up. The lower hip strap of the E-Z-ON™ Vest must remain low around the lap.
- Thread the loose end of each web strap back through the barslides on each shoulder to lock into place.
- Close the velcro on the sherpa shoulder pads with metal adjuster completely covered.



Connect the vest to the mount:

Have the child put on the vest and sit on the vehicle seat (a booster seat may be used for small children).

The adjustable E-Z-ON™ Vest hooks up to the Seat Mounts the same way the other E-Z-ON™ Vests do, with one small difference...instead of hooking the mount to the metal rings on the shoulder of the vest, hook the mount to the slot on top of the metal adjuster on the shoulder straps (see diagrams I and J). All other hook-up procedures are the same as detailed in the previous instructions (see "Use of the Locking Clip with Vehicle's Shoulder-Lap Belt" and "Placing the E-Z-ON Vest on the Child").



For further information or to place an order, call **1-800-323-6598**



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INSTALLATION AND USAGE INSTRUCTIONS

For the Model 101M Modified E-Z-ON™ VEST

WARNING

Failure to follow the manufacturer's instructions can result in child striking the vehicle's interior during a sudden stop or collision.

- This Modified E-Z-ON™ Vest is designed for children 2-years to 12-years old who weigh between **20-100 lbs.** in body casts, hip spica casts, braces and other configurations where the child must be transported in a supine position.
- The vest must be adjusted snugly around the child.
- Include the installation and usage instructions if the E-Z-ON™ Vest is given to a friend or donated to an organization.

Call for additional free copies of these instructions (1-800-323-6598).

How to Register your Child Restraint

Child Restraints could be recalled for safety reasons. You must register this restraint in order to be notified of a recall. Fill out the Registration Card enclosed with your E-Z-ON™ VEST or send your name, address and the restraint's model number and manufacturing date to E-Z-ON™ Products, Inc. of Florida, 605 Commerce Way West, Jupiter, Florida 33458 or call 1 (800) 323-6598. For recall information, call the U.S. Government Auto Safety Hotline at 1 (800) 424-9393. In the Washington D.C. area call (202) 366-0123.

For specific installation and usage instructions for the Modified E-Z-ON™ Vest, refer to pages 2, 3, & 4

Installation and Usage Instructions for the Model 101M Modified E-Z-ON™ VEST

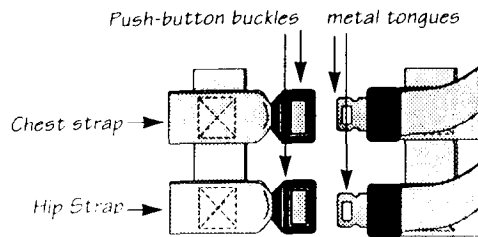


Diagram A

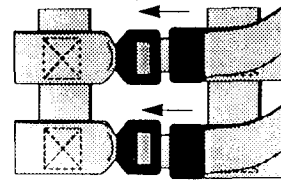


Diagram B

STEP #1: PUT THE VEST ON THE CHILD....

Place the Modified E-Z-ON™ VEST on the child with the closures in the front and the parachute emblem over the left shoulder strap.

If your vest has push-button closures (diagrams A & B):

- insert the metal tongue into the push-button buckle on the chest strap until you hear a snapping sound. Tug to make sure the connection is secure.
- repeat the above procedure on the hip strap.
- To adjust chest & hip straps:
 - To tighten: pull on the free ends of the belts.
 - To loosen: hold the adjusters at a right angle to the straps and pull.
- To unfasten chest & hip straps: press the button in the buckle.

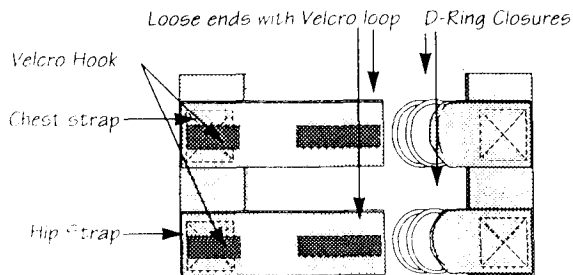


Diagram C

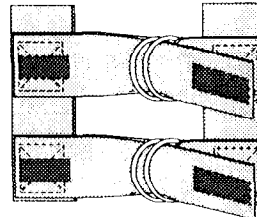


Diagram D

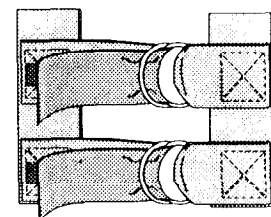


Diagram E

If your vest has D-Ring closures (diagrams C,D, E):

- Locate the loose end (with Velcro loop) of the chest strap (**diagram C**).
- Thread the loose end through **both** D-Rings on the opposite strap (**diagram D**), and pull the strap tight for a snug fit on the child.
- Then, loop the loose end **over** the first D-Ring and **through** the second D-Ring. Press Velcro loop on the loose end onto Velcro hook on the chest strap. (**diagram E**).
- Repeat the above procedure with the loose end of the hip strap.

If the shoulder straps do not fit snugly because of a cast, place a small rolled towel or cloth under the shoulder straps to take up the slack.

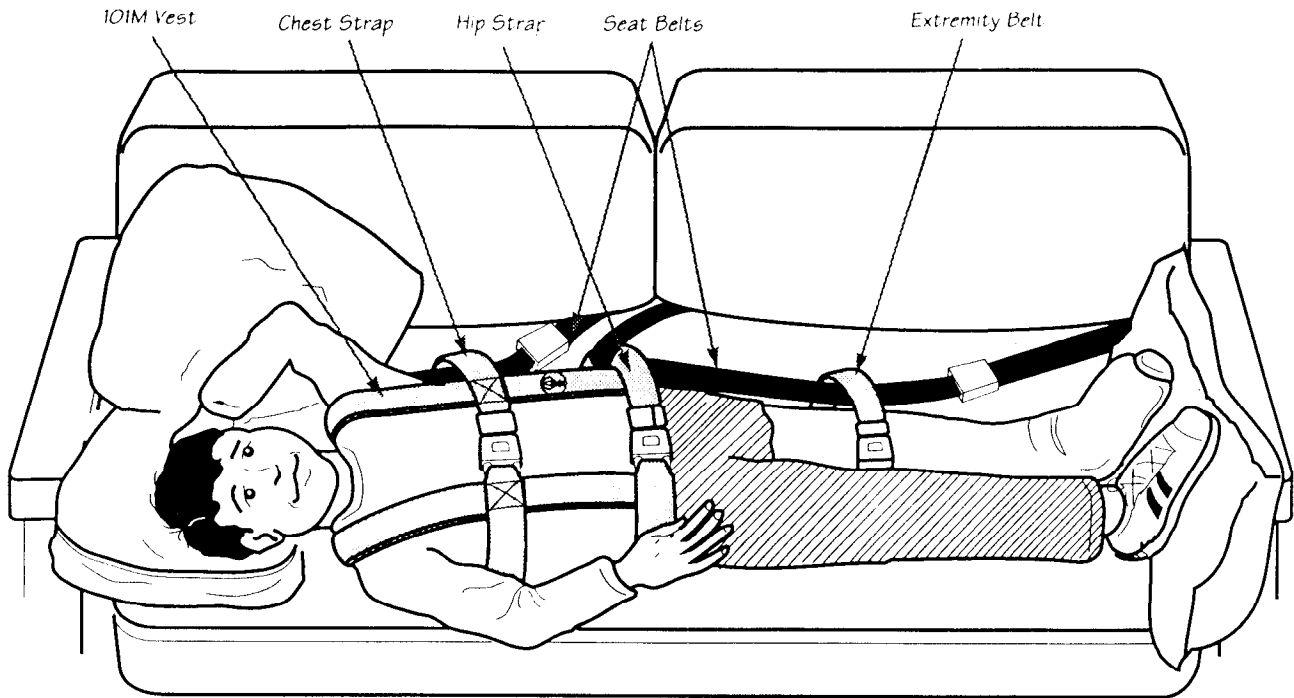


Diagram F

STEP #2: SECURE THE CHILD TO THE SEAT

Lay the child on the rear seat of the vehicle, placing the child in the center of the seat, away from the doors (or walls) of the vehicle. Using the existing seat belts, place one seat belt under the chest strap of the vest and secure that seat belt. Place the other seat belt under the lower hip strap of the vest and secure that belt. Secure both seat belts as tightly as possible.

The leg (or extremity) belt provided with the Modified E-Z-ON™ VEST should be used as follows:

- a. **If one leg is casted**, be sure that the cast is closest to the seat back. Place the extremity belt around the cast at the knee area, and secure to the same seat belt as the hip strap on the vest.
- b. **If both legs are casted**, place the extremity belt around both casts at the knee area, and secure to the same seat belt as the lower strap on the vest.
- c. **If neither leg is casted**, place the extremity belt around both legs at the knee area and secure to the same seat belt as the lower strap on the vest.

The Modified E-Z-ON™ VEST may be secured using lap type seat belts or shoulder/lap belts. If shoulder/lap belts are used, place the shoulder strap under the child. A locking clip is not mandatory.

STEP #3: IMPORTANT!

PROTECT THE HEAD AND NECK

Place a small pillow, thick foam, rolled towel or rolled blanket between the seat back and the child's head. This will minimize neck flexion in the event of a collision.

BE SURE TO KEEP THE CHILD'S HEAD AND FEET AWAY FROM DOORS OR WALLS OF VEHICLE. Place a pillow between the door or wall and the child's head to help prevent possible injury during a lateral collision. The same precaution should be used at the child's feet.

Please call
E-Z-ON PRODUCTS, INC. OF FLORIDA
if you...

- have questions;
- need assistance with installation;
- need additional information;
- or, want to place an order.

1-800-323-6598



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INSTALLATION AND USAGE INSTRUCTIONS

For the Model 101M-2 Modified E-Z-ON™ VEST

WARNING

Failure to follow the manufacturer's instructions can result in child striking the vehicle's interior during a sudden stop or collision.

- This Modified E-Z-ON™ Vest is designed for children 2-years to 12-years old who weigh between **20-100 lbs.** in body casts, hip spica casts, braces and other configurations where the child must be transported in a supine position.
- The vest must be adjusted snugly around the child.
- Include the installation and usage instructions if the E-Z-ON™ Vest is given to a friend or donated to an organization.

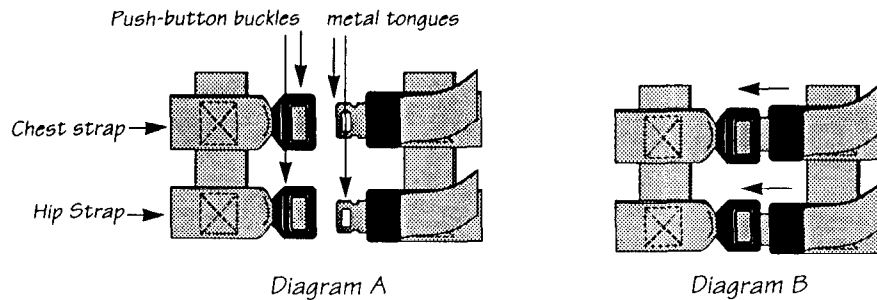
Call for additional free copies of these instructions (1-800-323-6598).

How to Register your Child Restraint

Child Restraints could be recalled for safety reasons. You must register this restraint in order to be notified of a recall. Fill out the Registration Card enclosed with your E-Z-ON™ VEST or send your name, address and the restraint's model number and manufacturing date to E-Z-ON™ Products, Inc. of Florida, 500 Commerce Way West, Jupiter, Florida 33458 or call 1 (800) 323-6598. For recall information, call the U.S. Government Auto Safety Hotline at 1 (800) 424-9393. In the Washington D.C. area call (202) 366-0123.

For specific installation and usage instructions for the Modified E-Z-ON™ Vest, refer to pages 2, 3, 4, & 5.

Installation and Usage Instructions for the Model 101M-2 Modified E-Z-ON™ VEST

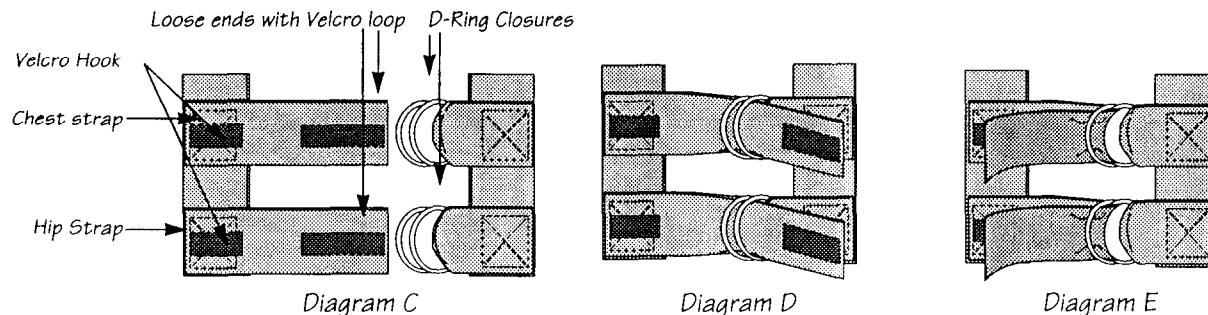


STEP #1: PUT THE VEST ON THE CHILD....

Place the Modified E-Z-ON™ VEST on the child with the closures in the front and the parachute emblem over the left shoulder strap.

If your vest has push-button closures (diagrams A & B):

- insert the metal tongue into the push-button buckle on the chest strap until you hear a snapping sound. Tug to make sure the connection is secure.
- repeat the above procedure on the hip strap.
- To adjust chest & hip straps:
 - To tighten: pull on the free ends of the belts.
 - To loosen: hold the adjusters at a right angle to the straps and pull.
- To unfasten chest & hip straps: press the button in the buckle.



If your vest has D-Ring closures (diagrams C,D, E):

- Locate the loose end (with Velcro loop) of the chest strap (**diagram C**).
- Thread the loose end through **both** D-Rings on the opposite strap (**diagram D**), and pull the strap tight for a snug fit on the child.
- Then, loop the loose end **over** the first D-Ring and **through** the second D-Ring. Press Velcro loop on the loose end onto Velcro hook on the chest strap. (**diagram E**).
- Repeat the above procedure with the loose end of the hip strap.

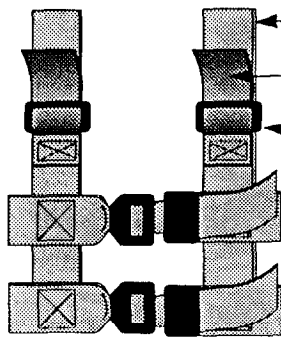


Diagram E

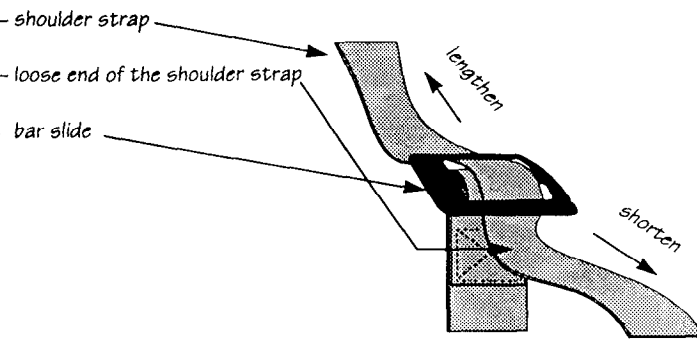


Diagram F

STEP #2: ADJUST THE FIT...

The shoulder straps should be adjusted so that the hip strap of the vest (the bottom strap with the push-buckle or D-Ring closure) is positioned over the pelvic bone when the vest is worn by the child.

To adjust the shoulder straps:

- a. Pull the loose end of the shoulder strap (see diagram E) out of the bar slide. The bar slide and the loose end of the shoulder strap should now look like **Diagram F**.
- b. **To shorten the shoulder strap**, hold the bar slide with one hand while pulling the loose end of the shoulder strap (see **Diagram F**).
- c. **To lengthen the shoulder strap**, hold the bar slide with one hand while pulling the shoulder strap (see **Diagram F**).
- d. **Secure the shoulder strap** by threading the loose end back through the bar slide (**Diagram G**). Pull loose end to tighten (**Diagram H**).
- e. Repeat the above steps on the other shoulder strap.

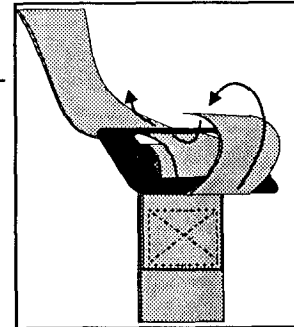


Diagram G

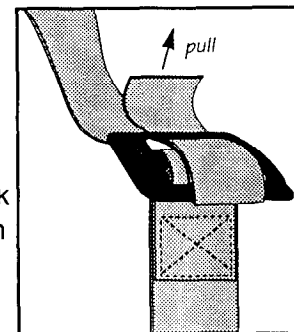


Diagram H

The crotch straps help keep the Modified Vest positioned correctly over the pelvic bone during use. **To adjust the crotch straps:**

- a. With the vest on the child, secure the crotch strap fastener.
- b. **To shorten the crotch strap**, hold the fastener at a right angle to the crotch strap and pull the loose end of the crotch strap (See **Diagram I**).
- c. **To lengthen**, pull on the crotch strap (See **Diagram I**).
- d. Repeat on other side.

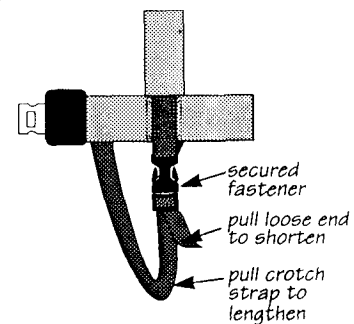


Diagram I

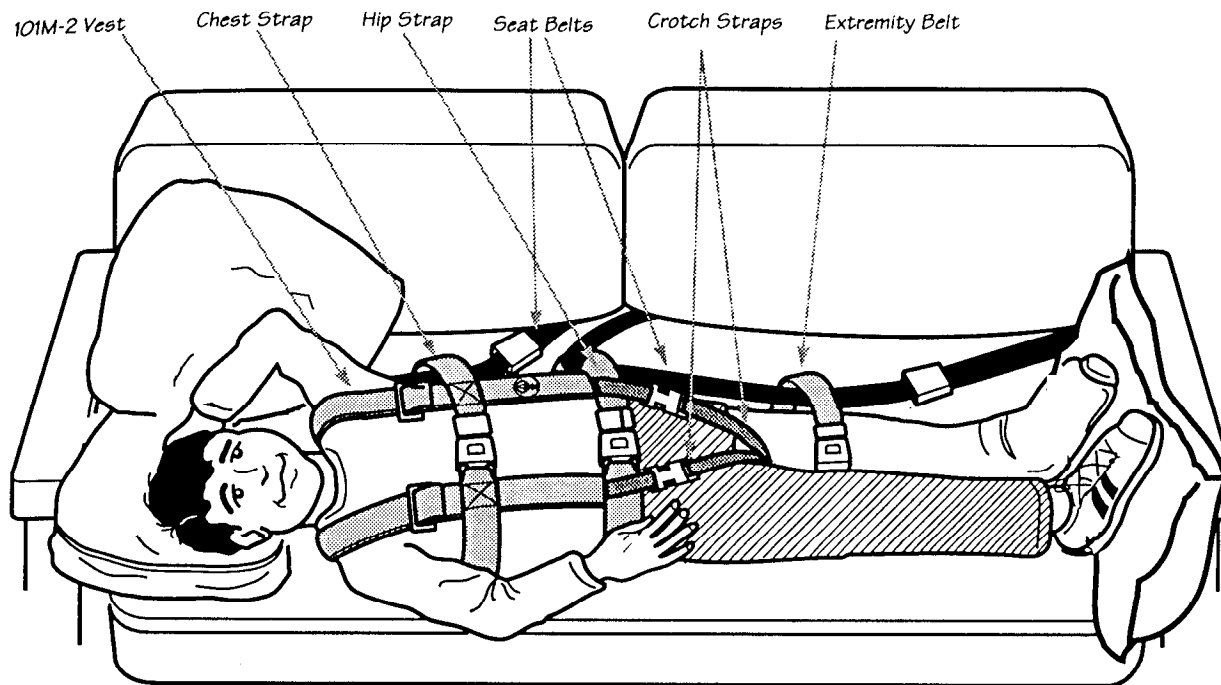


Diagram F

STEP #3: SECURE THE CHILD TO THE SEAT

Lay the child on the rear seat of the vehicle, placing the child in the center of the seat, away from the doors (or walls) of the vehicle. Using the existing seat belts, place one seat belt under the chest strap of the vest and secure that seat belt. Place the other seat belt under the lower hip strap of the vest and secure that belt. Secure both seat belts as tightly as possible.

The leg (or extremity) belt provided with the Modified E-Z-ON™ VEST should be used as follows:

- a. **If one leg is casted**, be sure that the cast is closest to the seat back. Place the extremity belt around the cast at the knee area, and secure to the same seat belt as the hip strap on the vest.
- b. **If both legs are casted**, place the extremity belt around both casts at the knee area, and secure to the same seat belt as the lower strap on the vest.
- c. **If neither leg is casted**, place the extremity belt around both legs at the knee area and secure to the same seat belt as the lower strap on the vest.

The Modified E-Z-ON™ VEST may be secured using lap type seat belts or shoulder/lap belts. If shoulder/lap belts are used, place the shoulder strap under the child. A locking clip is not mandatory.

INSTRUCTIONS CONTINUED ON PAGE 5

STEP #4: IMPORTANT!

PROTECT THE HEAD AND NECK

Place a small pillow, thick foam, rolled towel or rolled blanket between the seat back and the child's head. This will minimize neck flexion in the event of a collision.

BE SURE TO KEEP THE CHILD'S HEAD AND FEET AWAY FROM DOORS OR WALLS OF VEHICLE. Place a pillow between the door or wall and the child's head to help prevent possible injury during a lateral collision. The same precaution should be used at the child's feet.

PLEASE CALL
E-Z-ON PRODUCTS, INC. OF FLORIDA IF YOU
HAVE ANY QUESTIONS, NEED ADDITIONAL
INSTRUCTIONS
OR WOULD LIKE TO PLACE
AN ORDER.
1-800-323-6598



E-Z-ON PRODUCTS, INC. OF FLORIDA

605 Commerce Way West • Jupiter, FL 33458 • Phone (561) 747-6920 • Fax (561) 747-8779



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Using the E-Z-ON™ Vest Wheelchair Mounting Strap

WARNING

Not all wheelchairs are designed for use with transportation safety restraints. It is the user's responsibility to ensure that their wheelchair meets transportation safety standards and is secured to the vehicle with wheelchair tie-downs or similar device.

- The E-Z-ON™ Vest and wheelchair mounting strap are to be used only as a passenger restraint system. The wheelchair mounting strap is not designed to be used as a wheelchair tie-down. The wheelchair must be secured to the vehicle with wheelchair tie-downs or similar device.
- The E-Z-ON™ VEST is designed for children and adults who weigh between **20-160 lbs.**
- The E-Z-ON™ VEST must be adjusted snugly around the passenger.
- Include the installation and usage instructions if the E-Z-ON™ VEST is given to a friend or donated to an organization.

If you have any questions on how to install or use the wheelchair seat mount, the E-Z-ON™ Vest, or need additional free copies of these instructions, please call toll-free (1-800-323-6598).

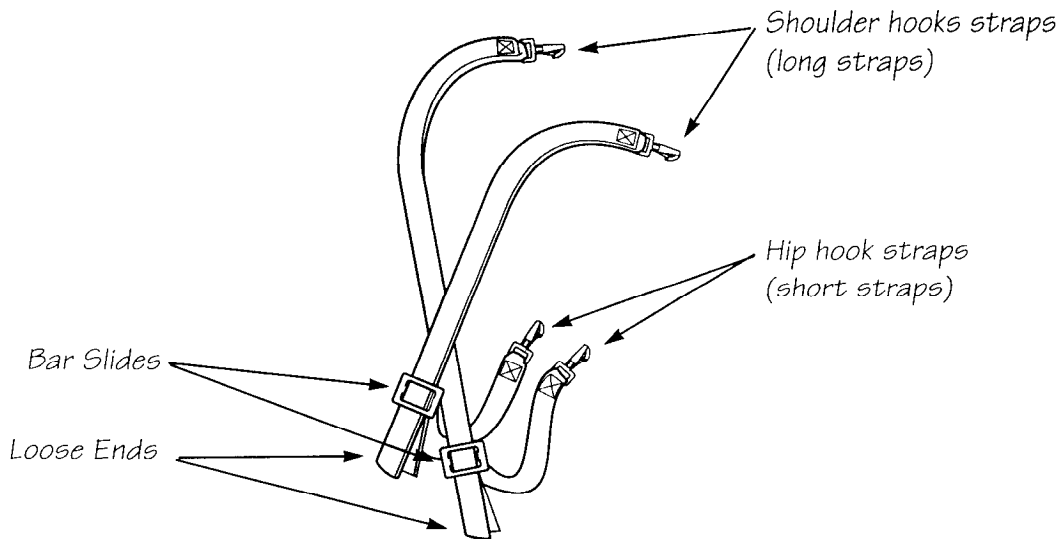
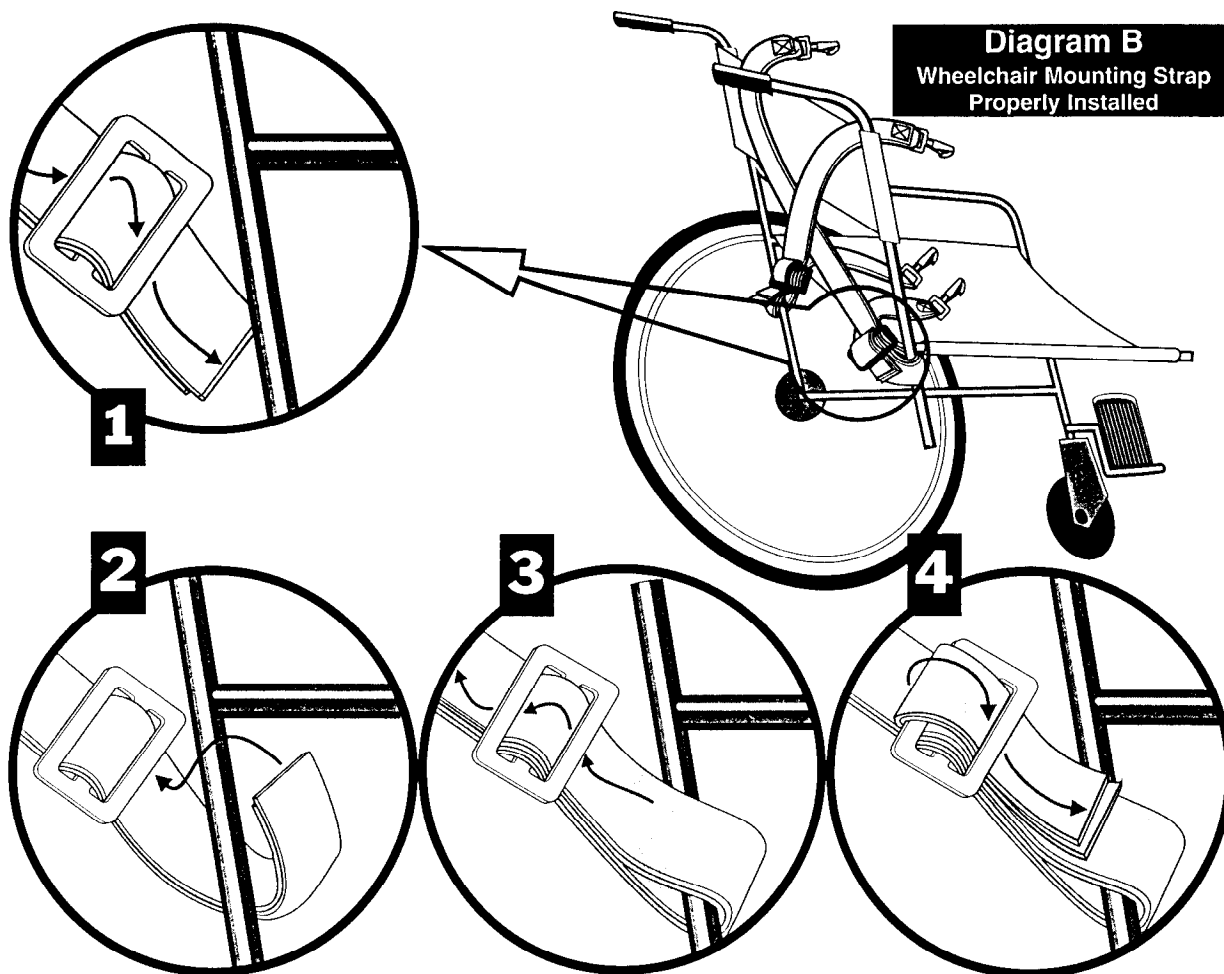


Diagram A- Wheelchair Mounting Strap

Instructions continued on back



Installing and Adjusting the Wheelchair Seat Mount

- 1** Position the shoulder and hip hooks on the chair as shown in Diagram B. Take the loose ends of one shoulder hook strap and one hip hook strap, and thread them through the bar slide as shown in Diagram 1.
- 2** Wrap both loose ends around the wheelchair frame below a cross member (diagram 2).
- 3** Thread both the loose ends back through the bar slide (diagram 3).
- 4** Secure the strap by threading the loose ends back over the first bar and under the next bar of the bar slide (diagram 4).

Repeat above procedure for the other set of straps. Attach hooks to the hardware on the E-Z-ON™ Vest. If there is any slack in the shoulder or hip straps, repeat steps 1-3, adjusting the length of the straps to eliminate slack.

For further information or to place an order, call **1-800-323-6598**

EZ9701031998

Model 86-Y Universal Harness

USING THE SHOULDER HARNESS



*Meets
Federal
Motor
Vehicle
Safety
Standards*

Diagram C

OLDER CHILDREN AND ADULTS

1. Place the "LOOP END" straps over each shoulder.
2. Thread your vehicle's lap seat belt through both "LOOP ENDS" and fasten the seat belt low and snug around the pelvis area.
3. Adjust the shoulder straps:
 - to lengthen: hold the loop end and pull up on the narrow web tab located on each metal adjuster.
 - to shorten: pull down on the wider webbing that is threaded through the metal adjuster.

ADJUST THE SHOULDER STRAPS SO THERE IS NO SLACK, BUT...DO NOT TIGHTEN SHOULDER STRAPS TO THE POINT THAT THE SEAT BELT IS BEING PULLED UP OVER THE ABDOMEN. KEEP THE SEAT BELT SECURED LOW AND SNUG OVER THE PELVIS. See diagram "C" for proper securement.

YOUNGER CHILDREN (AGES 4-7)

CAUTION! DO NOT USE THIS HARNESS ON CHILDREN UNDER 4 YEARS OLD.

Children ages 4-7 may use the harness with the following precautions:

1. The child may sit on a Booster Seat when wearing the harness. This will prevent the child from slipping under the belt and will allow the child to see out of the vehicle windows.
2. Proper securement of the lap seat belt and proper adjustment of the shoulder harness is very important for the safety of the child! PLEASE FOLLOW THE SHOULDER HARNESS INSTRUCTIONS CAREFULLY!

WARNING!

E-Z-ON PRODUCTS, INC. OF FLORIDA RECOMMENDS REPLACING ANY SEAT BELT OR RESTRAINT SYSTEM THAT HAS BEEN INVOLVED IN AN ACCIDENT.

THE SHEEPSKIN PADS

We've added sheepskin pads for your comfort. After properly adjusting your shoulder straps, just wrap the pads around the adjusters and secure with the velcro closure.



E-Z-ON PRODUCTS, INC. OF FLORIDA

500 Commerce Way West • Jupiter, FL 33458

1-800-323-6598

MODEL 86-Y UNIVERSAL HARNESS

INSTALLATION INSTRUCTIONS

**86-Y Installation
Help Line
1-800-323-6598**

IMPORTANT!

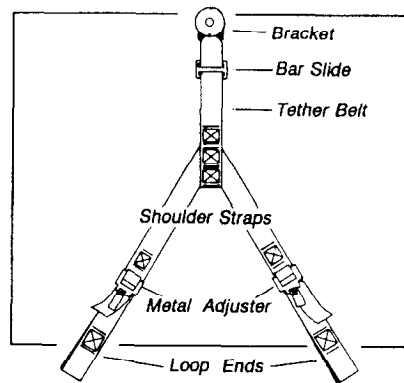
This is a safety device. It must be installed and used according to these instructions.

Read and follow the installation instructions carefully. If you have any questions please call our toll-free number. The Installation Help Line is manned from 9:00 a.m. to 4:00 p.m. Eastern Time. If you call after hours or on weekends, please leave your name, number, and a time of day when we can call you. One of our installation experts will call you back during business hours.

1 The Installation Kit:

Item	Qty
86-Y Universal Harness.....	1
7/16" Bolt (1 1/2" long).....	1
2 3/8" Diameter Safety Washer.....	1
Lock Washer.....	1
Nut.....	1
Bar Slide.....	1
Bracket.....	1

You will need: a drill, 7/16" drill bit, crescent wrench, and silicone sealant



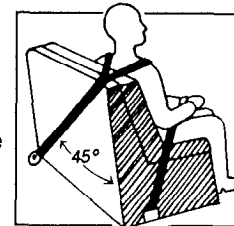
2 Rear Seat Installation

OPTION 1: Rear Window Package Shelf

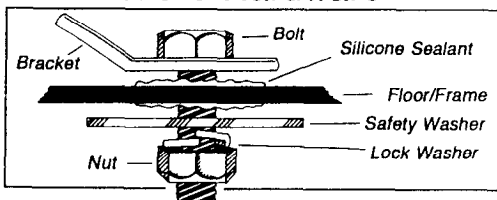
Consult your automobile dealer or qualified mechanic for correct anchor locations. Most late model automobiles have tether slots or pre-drilled holes compatible with our anchoring hardware. Refer to your vehicle manual for the exact locations.

OPTION 2: Behind the Seat (Trunk or Luggage Space)

WARNING: BE SURE TO IDENTIFY AND LOCATE FUEL AND EXHAUST LINES BEFORE DRILLING ANCHOR HOLE. Consult your automobile dealer or qualified mechanic for correct anchor locations. The anchor points must be located at a 45 degree angle from the top of the seat back. Use a 7/16" drill bit, and apply silicone sealant around holes before installing hardware.



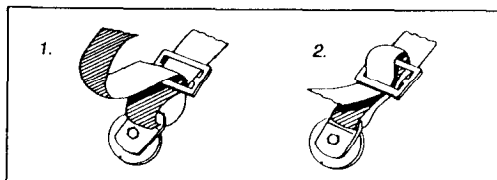
3 Install the Hardware



Once you've decided the location for anchoring hardware and have drilled the 7/16" anchoring point, install the anchoring hardware as shown in diagram "A".

Diagram A

4 Adjust the Bar Slide



Take up slack in the tether belt by adjusting the bar slide until the "V" in the harness (where the shoulder straps meet) is located on top of the seat back. After making length adjustment to tether belt, be sure the web is properly threaded & locked in bar slide (See diagram B).

Diagram B

E-Z-ON PRODUCTS, INC. OF FLORIDA
presents
"Children Are Our Future"

A 7 minute educational video...
Available free of charge and with no obligation!

"Children Are Our Future" includes a TV newscast on the accident described in the following newsletter article and Connie Murray, President of E-Z-ON PRODUCTS, INC. OF FLORIDA demonstrating E-Z-ON's dynamically tested safety restraints.

DATELINE

March 1992

Published by the Franklin County Board of Mental Retardation and Developmental Disabilities

Driver, Vests, Save Lives



Thanks to the good work of Bus Driver Bobbie Gibson and to some safety vests, eight pre-schoolers escaped serious injury in a recent bus accident.

On February 12, 1992, one of the Board's buses was involved in a serious accident at the corner

of Long Street and Parkwood. The accident occurred when a pick-up truck ran through a stop sign and was hit broadside by an FCBMR/DD school bus. The impact of the collision caused the bus to roll over at least once, according to witnesses.

According to Don Harlow, Assistant Superintendent responsible for Transportation Services, "Bobbie Gibson did an excellent job in making sure that the children were securely fastened to their seats with safety vests and seat belts." Bobbie, who suffered a fractured wrist in the accident, "also did an excellent job of evacuating the bus after the accident."

The eight children, who were on their way home from their pre-school program at St. Phillips Episcopal Church, were taken to Children's Hospital to be checked out, and aside from some minor

cuts and bruises, all were fine. Rebecca Love, Director of E.C.E., who met with all the children and their families at Children's Hospital, stated that "the Doctors commended the Board for their safety vest system, as the vests probably saved the children's lives."

Don Harlow also commended Jim Boyd, Transportation Supervisor, and the Transportation Staff, for their work in making sure that safety vests are used. While not required, the vests have been in use for several years for all little children, whose feet don't reach the floor of the bus from the seat, and in some special situations for physically and/or behaviorally handicapped individuals who need this additional safety support.

Congratulations to the Transportation staff and thanks to all other FCBMR/DD and Head Start staff and families for their cooperation during this difficult situation. Reprinted with permission of the Franklin County Board of Mental Retardation & Developmental Disabilities.

☐ Please send me a copy of your educational video, "Children Are Our Future," free of charge and with no obligation.

I need the video by : _____
(Date)

(Name) _____

(School/Business/Hospital/Organization) _____

(Street Address) _____

(City) _____ (State) _____ (Zip) _____

(Area Code) _____ (Number) _____



“CHILDREN ARE OUR FUTURE”



E-Z-ON-PRODUCTS, INC. OF FLORIDA PRESENTS
A FREE EDUCATIONAL VIDEO . . .



Connie Murray

I urge buyers to request written certification when purchasing safety restraints so they may be assured the restraints are dynamically tested to meet Federal Motor Vehicle Standards...

As a former surgical nurse, I have seen the tragic consequences when accident victims have not been properly restrained. Everyone should remember to wear their seat belts and to place children in appropriate car seats and child safety restraints. Children are our future, and their safety must be recognized as a national priority."

Connie Murray, RN
President, E-Z-ON Products, Inc. of Florida



E-Z-ON PRODUCTS, INC. OF FLORIDA

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E-Z-ON PRODUCTS, INC. OF FLORIDA
605 Commerce Way West, #3
Jupiter, FL 33458-9935



E-Z-ON™ ADJUSTABLE VEST

WITH BUILT-IN ZIPPER PANEL & ADJUSTABLE SHOULDER STRAPS



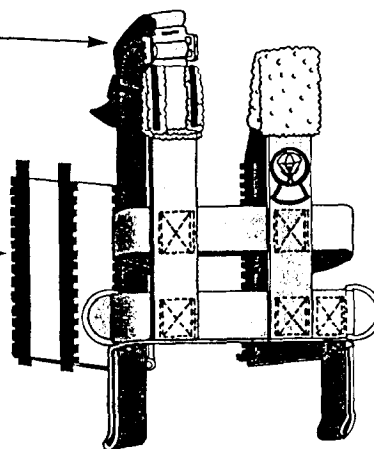
THE VEST THAT GROWS WITH THE CHILD!

ADJUSTABLE SHOULDER STRAPS

Make quick, "one-pull" adjustments to lengthen the vest to ensure proper positioning of the straps in the lap area. Maintains a safe fit as the child grows. Sherpa Fleece Neck Pads have Velcro closure for instant access to slide buckles. Bar slides help deter children from loosening adjusters.

BUILT-IN ZIPPERS

Adjust chest and waist straps to accommodate growth and heavy clothing.



- Meets FMVSS213
- Use with E-Z-ON's Seat Mount or Tether Strap.
- New sizes fit age 2 through adult
- Four sizes available: XX-Small (ages 2 - 5), Small (children), Medium (youth) and Large (adults)
- Accessories are available.

THE E-Z-ON™ ADJUSTABLE VEST

Model No. 103Z

U.S. Pat. No. 5,733,014

To order or for more information, call toll-free



1-800-323-6598



E-Z-ON PRODUCTS, INC. OF FLORIDA

605 Commerce Way West • Jupiter, FL 33458 • FAX (561) 747-8779

EZ9803931998

E-Z-ON™ ADJUSTABLE VEST
WITH BUILT-IN ZIPPER PANEL
& ADJUSTABLE SHOULDER STRAPS



Children like wearing the E-Z-ON™ VEST and its distinctive parachute logo.

E-Z-ON™ VEST

WITH BACK ZIPPER CLOSURE

Transport disabled children and adults with
SUPPORT, SAFETY & SECURITY

A Support System

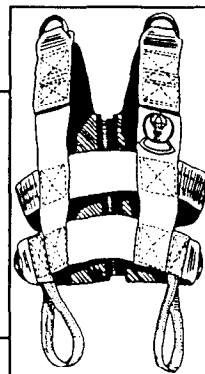
E-Z-ON™ VEST provides support by helping hold the wearer upright.

A Safety System

E-Z-ON™ VEST is dynamically tested and meets Federal Motor Vehicle Safety Standards.

A Restraint System

E-Z-ON™ VEST is appropriate for the person who needs to be restrained because of behavioral or physical disabilities. E-Z-ON™ VEST's back zipper closure discourages unauthorized opening or removal. Accessories are available to provide additional securement.



QUICK AND CONVENIENT

- Vest quickly clips to mounting strap.
- E-Z-ON™ Vest can be put on before entering the vehicle (no more awkward struggling in the confined space of the vehicle).
- With our mounting straps installed, it is easily used in any family vehicle, bus, or wheel chair.
- Washable

SIZE INFORMATION

WAIST MEASUREMENT (with coat on)	SIZE
Children:	
22"	Extra Small (XS)
25"	Small (S)
28"	Small Medium (SM)
32"	Medium (M)
Adults:	
34"	Medium Large (ML)
37"	Large (L)
40"	Extra Large (XL)
43"	Extra Extra Large (XXL)

ORDERING INFORMATION

DESCRIPTION	MODEL NUMBER
Children's sizes	
E-Z-ON VEST w/Portable Seat Mount	101S
E-Z-ON VEST w/Permanent Floor Mount	101FM
E-Z-ON VEST w/Tether Strap Mount	101TC
E-Z-ON VEST w/ Wheelchair Mount	101WC
Adult sizes	
E-Z-ON VEST w/Portable Seat Mount	102S
E-Z-ON VEST w/Permanent Floor Mount	102FM
E-Z-ON VEST w/Tether Strap Mount	102TC
E-Z-ON VEST w/ Wheelchair Mount	102WC

To order or for more information, call toll-free



1-800-323-6598



E-Z-ON PRODUCTS, INC. OF FLORIDA

605 Commerce Way West • Jupiter, FL 33458 • FAX (561) 747-8779

E-Z-ON™ VEST WITH BACK ZIPPER CLOSURE

E-Z ACCESSORIES

CUSTOMIZE E-Z-ON VEST™ FOR EVERY NEED



A. SHERPA NECK PADS Item No. 100NP

For added comfort. Velcro closure offers easy access to shoulder adjusters. Bottom of Sherpa Neck Pads can be stitched to shoulder strap so the Neck Pads won't get lost. 8" Length standard, 12" Length available.

B. CROTCH STRAPS Item No. 100CRP

Helps keep E-Z-ON VEST™ properly positioned low over the child's hip. Snap-on portable model or sewn-on model available.

C. ZIPPER INSERTS Item No. 100AZ

Just zip into any zipper closure E-Z-ON VEST™ to adjust vest size for seasonal clothing and growth. Four sizes available for our XX-Small, Small, Medium and Large E-Z-ON VESTS.™

D. WRIST RESTRAINTS Item No. 100WRP

Wrist restraints clip to the rings on the hip straps of the E-Z-ON VEST™. Each restraint features a push-buckle closure with one-pull adjustment for quick securement.

E. ANKLE RESTRAINTS Item No. 100AR

Three push-buckle closures for quick securement and easy one-pull adjustment.

F. LOCKING CLIP Item No. 4012

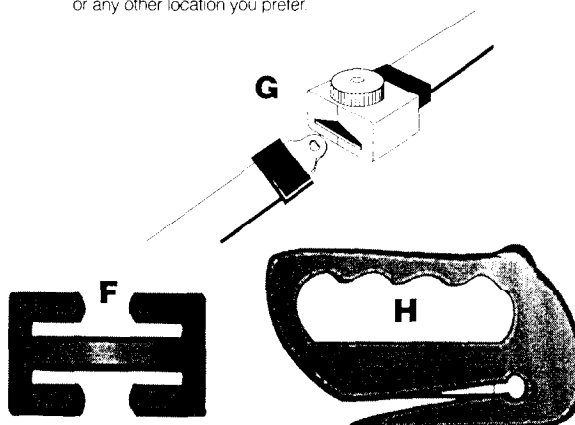
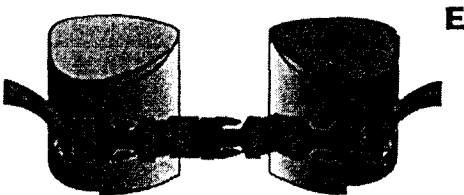
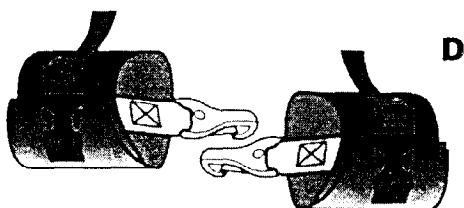
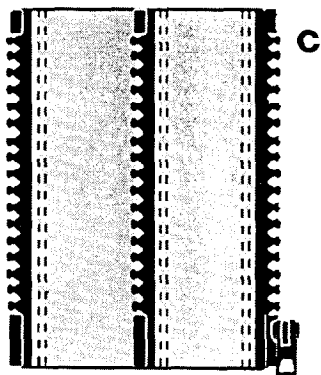
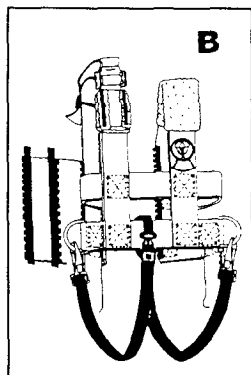
Use to combine a vehicle's shoulder strap and lap belt to thread through the hip loops on the E-Z-ON VEST™.

G. BUCKLE GUARD Item No. 100BG

Child-resistant safety cap helps deter unauthorized opening of standard push-button closures on seat belts, harnesses and safety seats.

H. SAFECUT WEBBING CUTTER Item No. 1004

Quickly and safely cut seat belts, harnesses and tie-downs in emergency situations. Durable polycarbonate with a replaceable blade. Bright yellow for easy locating. Velcro mounts to dashboard or any other location you prefer.



To order or for more information, call toll-free

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E-Z

CUSTOMIZE E-Z-ON VEST™ FOR EVERY NEED

E-Z-ON SEAT BELTS

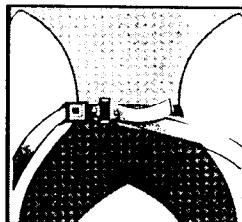
STANDARD & CUSTOM



E-Z-ON

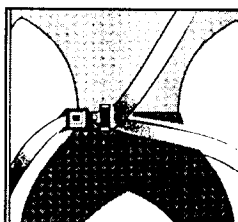
STANDARD & CUSTOM

SEAT BELTS & HARNESSES WITH STANDARD ANCHORS*



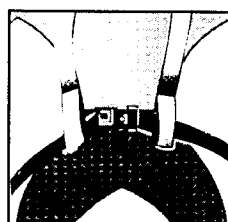
Model 45PB

Standard seat belt with push-button closure.



Model 48R

Retractable belt/harness with push-button closure.



Model 86-Y

Two strap shoulder harness with loops for existing lap belt.
(See 86-Y product sheet for additional details).

All seat belts...

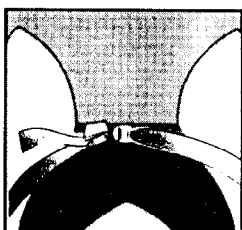
- are adjustable
- are equipped with a push-button closure and standard anchor hardware
- have webbing and hardware that meet federal and SAE standards
- are available in different colors for color-coding convenience. Ask about our selection of colors.

* Standard anchor hardware is a fixed-end fitting for bolt anchor. Custom anchoring options and hardware are available.

Fixed-end fitting for bolt anchor →



SEAT BELTS FOR WHEELCHAIRS



Model 45WC

Wheelchair seat belt with lift-release buckle.
Secured with Flat Straps or Track Fittings (please specify).



Track Fitting



Flat Strap

Custom Belts, Straps & Harnesses

Ask us for a quote on custom belts made to your specifications. Or, let us know how the belt will be used, and E-Z-ON can help with the design.

E-Z-ON PRODUCTS is experienced in designing restraints, straps and belts for vehicles, equipment, machinery, wheelchairs and more. Call us toll-free at 1-800-323-6598 to discuss your application.

SCHOOL BUS SEAT BELTS

50" Length helps eliminate "flying belts" and floor clutter. Bus driver seat belts to meet your state's standards available



Model 45-1

Fixed End Fitting.
Bolt anchor for approved bus seats.



Model 45-2

Fixed Loop End.
Recommended for approved seats with tubular frames.



Model 45-3

Adjustable Loop End.
Optional anchorage for any approved seats.



Model 45-PB

Push Button Buckle.
Standard with all anchoring options.

IMPORTANT NOTE: E-Z-ON Seat Belts may be used with most school bus seats, however, it is your responsibility to determine if your bus seats are approved for seat belt installation.

To order or for more information, call toll-free

1-800-323-6598



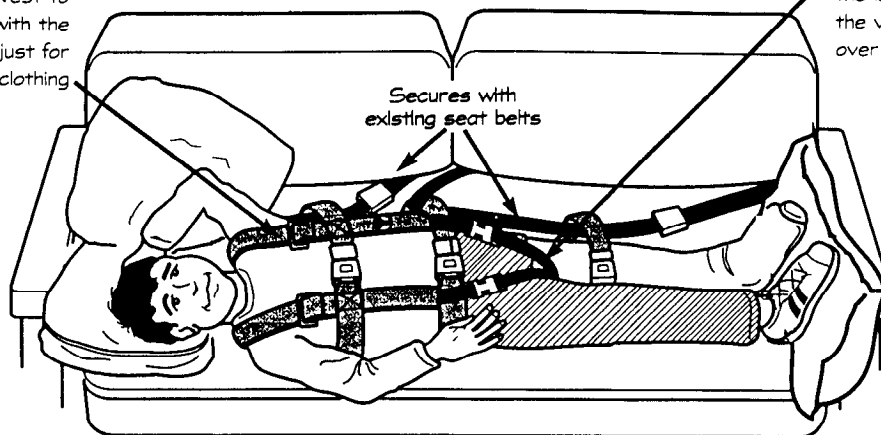
E-Z-ON PRODUCTS, INC. OF FLORIDA

500 Commerce Way West • Jupiter, FL 33458 • FAX (561) 747-8779

E-Z-ON™ MODIFIED VEST

TRANSPORT CHILDREN IN A PRONE OR SUPINE POSITION

Shoulder Adjusters enable the vest to "grow" with the child or adjust for seasonal clothing.



Crotch Straps keep the lower hip strap of the vest positioned over the pelvis.

The E-Z-ON™ MODIFIED VEST (model number 101M2) is dynamically tested and meets FMVSS213. Shown with optional push-button closures. (D-Ring closures are standard.)

Transport children in a prone or supine position securely

Certain physical disabilities (such as spinal injury, body cast, long leg cast or hip spica) require a child to "lie down" when riding in a vehicle. The Modified Vest enables these children to be transported safely and securely.

Great for long trips...for all children!

Now a child can nap comfortably in the car, and parents can have peace of mind knowing that their child is still secured to the vehicle's seat belts.

Uses your vehicle's existing seat belts

No modifications or locking clips are necessary. Just put the vest on the child (adjust it for a snug fit the first time you use it), lay the child on the seat, and secure the vehicle's existing seat belts after threading them through the sides of the vest and the leg belt. Place pillows as shown for comfort and protection in case of collision. *Complete, detailed instructions are included with each E-Z-ON™ MODIFIED VEST.*

ORDERING INFORMATION

For most children ages 5-12 Model No. 101M2 (Double D-Ring Closure standard, Push-Button closure optional).

For most children ages 2-5 Model No. 101M2/XXS (Available in Double D-Ring closure only).

To order or for more information, call toll-free

 **1-800-323-6598** 



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605 Commerce Way West • Jupiter, FL 33458 • FAX (561) 747-8779

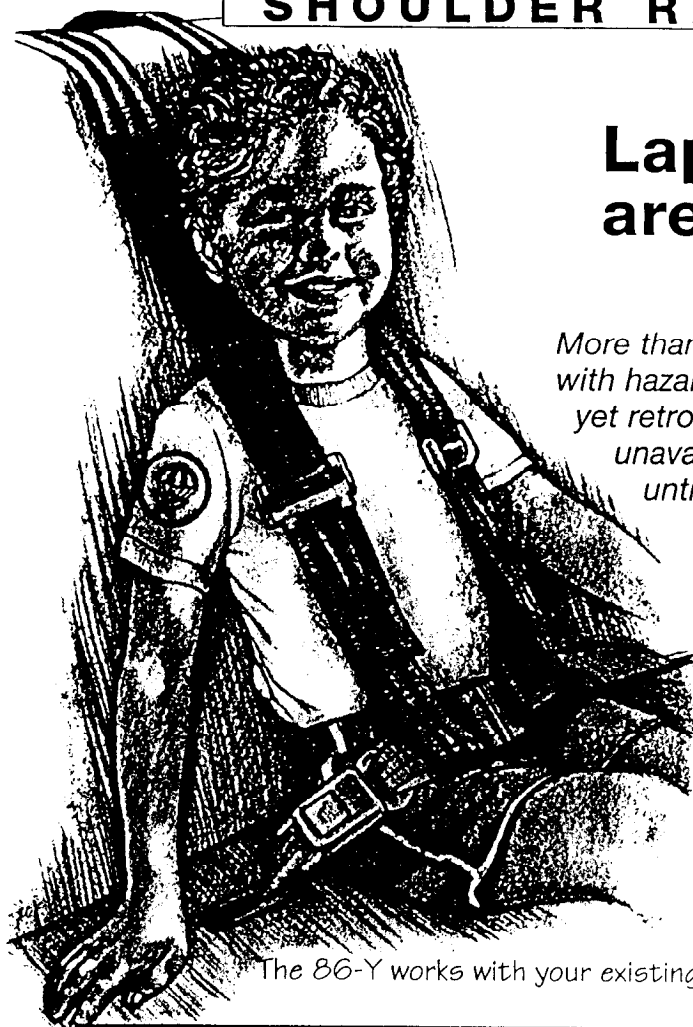


E-Z-ON™ MODIFIED VEST

**TRANSPORT CHILDREN IN
A PRONE OR SUPINE POSITION**

86-Y UNIVERSAL HARNESS

SHOULDER RESTRAINT



Lap belts alone are not enough!

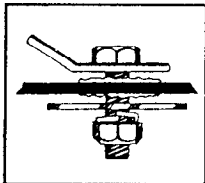
*More than 140 Million cars are equipped
with hazardous lap-only rear seat belts...
yet retrofit shoulder restraints were
unavailable or prohibitively expensive..
until now!*

With E-Z-ON'S UNIVERSAL HARNESS, your back
seat passengers will enjoy the same level of
protection as airline pilots and race car drivers.

- FMVSS Tested
- Costs hundreds of dollars less than
dealer retrofits.
- Easy to install & use.
- Made in the USA

The 86-Y works with your existing lap belt

THE MODEL 86-Y UNIVERSAL HARNESS



Easy to install

Most late model autos have
tether slots or pre-drilled
holes compatible with our
anchoring hardware.



Easy to Use

Just place the loop ends over each
shoulder, thread your vehicle's lap seat
belt through both loop ends, and fasten
the seat belt low and snug over the
pelvic area. The shoulder straps on the
86-Y Universal Harness adjust to fit
ages 5 through adult. Complete
installation and usage instructions come
with every 86-Y Universal Harness.

To order or for more information, call toll-free



1-800-323-6598



Dealer Inquiries Invited



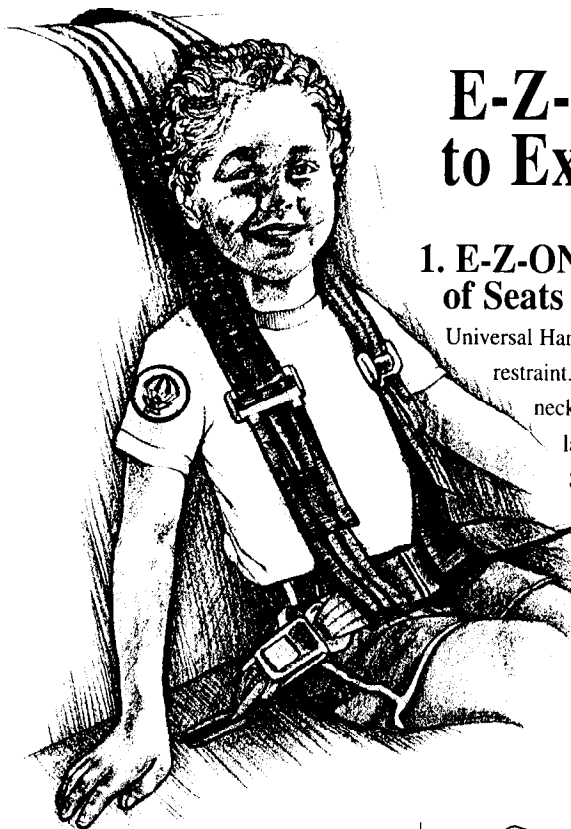
E-Z-ON PRODUCTS, INC. OF FLORIDA

605 Commerce Way West • Jupiter, FL 33458 • FAX (561) 747-8779



86-Y UNIVERSAL HARNESS

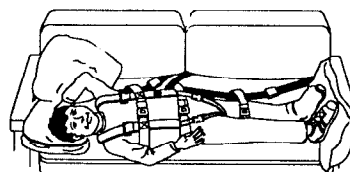
SHOULDER RESTRAINT



E-Z-ON™ Presents 10 Ways* to Exercise a Little Restraint

1. E-Z-ON™ Universal Harness for All Types of Seats

Great for vehicles that only have lap belts in the back seats. The Universal Harness supplements a vehicle's lap belt with two straps for upper body restraint. Fits ages 5 through adult and eliminates dangerous "across-the-neck" positioning of standard shoulder straps (locking clip required for lap/shoulder belts). Works with existing seat belts. Simple to install. Shoulder adjusters are padded for comfort.



8. 101-M2 Modified E-Z-ON™ Vest.

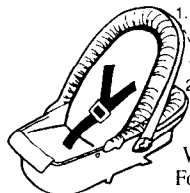
For transporting children up to 100 lbs. while traveling in a prone or supine position (often necessary for spinal injury, body

cast, or hip spica). Use with existing seat belts. Extremity belt included. Adjustable for growth and seasonal clothing. Available in two sizes.



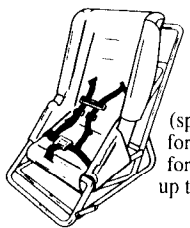
2. E-Z-ON™ Vest

Transport children through adults with special needs with this supportive vest. Other styles and accessories are available.



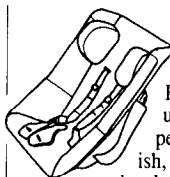
3. Dream Ride™ Infant Car Bed

Rear-facing car seat converts to side facing car bed. Use also as a carrier and rocking cradle. Washable quilted cover. For infants up to 17 lbs.



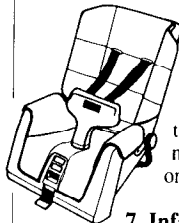
4. SPELCAST Car Seat

A car seat specially modified for children in pelvic (spica) casts. Use rear-facing for children up to 20 lbs., forward facing for children up to 40 lbs.



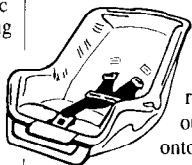
5. Columbia Orthopedic Positioning Seat

For children 20-102 lbs., up to 5 ft. tall. The orthopedic shell features a stylish, washable cover; padded head supports are adjustable, removable. Safety harness positions easily. Can also be used in Pogon, MacLaren and Convaaid strollers or in a wheelchair with removable arm rests. FAA approved.



6. Toddler Car Seat

Toddler car seat offers adjustable shoulder strap height and broad, padded torso shield. Available in machine washable fabric or easily cleaned vinyl.



7. Infant Car Seat/Carrier

Rear-facing car seat for infants up to 18 lbs. Features hand grips for carrying comfort and a rocking base with a pull-out stand. It also locks onto most shopping carts!



9. Carrie® Bus Seat

Light, shock absorbing foam seat and optional head and foot rests provide comfort and therapeutic positioning. Available in two sizes: small (30-48", 20-60 lbs.); and large (48"-58", 50-100 lbs.).



10. Booster Car Seat

Fabric seat adjusts for growing children. With shield, the Booster Car Seat accommodates children weighing 30-45 lbs. Remove the shield for children 45-60 lbs and use with vehicle's lap/shoulder belt.

*All products meet Federal Motor Vehicle Safety Standards

Many other options are available. Call toll-free for more information or the distributor in your area.

1-800-323-6598



E-Z-ON™ PRODUCTS, INC. OF FLORIDA

605 Commerce Way West • Jupiter, FL USA • 33458 • Local & International (561) 747-6920

Fax: (561) 747-8779 • Web: ezonpro.com

FREEDOM DESIGNS, Inc.

2241 Madera Road
Simi Valley, CA 93065

<http://freedomdesigns.com>

Phone: Customer service (800) 331-8551

Fax: (805) 582-1509

E-mail: @freedomdesigns.com

Product family at a glance for clinicians:

Popular name for device	Model/Order #	Useful for which diagnoses?
Freedom Designs, Inc. Pediatric Mobility Systems	Spectrum 1 and Spectrum 3 frames (standard, front wheel drive and folding tilt styles), and Small Fry frames	Various Also approved components: Econo-Eze Transport-solid seat Econo-Eze Transport-solid back Lateral Thigh Guides-fixed Lateral Thoracic Supports-fixed Hor./Vert Adjustable Headrest, multi-adj. headrest, swing away trunk supports, low profile occipital head support pad, hip guide/armrest combo
Freedom Design Transport Option	Transport Option Must be factory installed	Vehicle Occupant Protection

Warranties available? Yes If yes, description attached? Yes (in manual)

History of Medicaid/insurance/state disability purchases for individuals? Yes If yes, roll call of states attached? All 50

Product specifications at a glance for clinicians:

Device name	Height/Length ranges	Weight ranges	Recline ranges/options	RF range	FF range	Accessories for positioning
Spectrum 1: standard, front wheel drive, folding tilt	10-18" Widths 8-22" Depths	standard, fwd 51-168 lbs. folding tilt 51-150 lbs.	Must be in upright position as occupant protection device	Not Applicable	Forward Facing for transport only	Freedom Design Seating and Positioning
Spectrum 3 standard, front wheel drive, folding tilt	10-18" Widths 10-22" Depths	standard, fwd 51-168 lbs. folding tilt 51-150 lbs.	Must be in upright position as occupant protection device	Not Applicable	Forward Facing for transport only	Freedom Design Seating and Positioning
Small Fry	10-18" Widths 4-13" Depths	51-100 lbs.	Not Applicable	Not Applicable	For. Facing for transport only	Freedom Design Seating and Positioning

Product installation specifications at a glance for clinicians:

Appropriate vehicle environments: (check any that apply)

☒ Vans ☒ School buses ☐ Ambulances ☒ Other (specify): Transit vehicles

Product name	Tether needs/ Cam wrap needs	Tether/cam kits standard?	Installation assessment alerts
Freedom Designs, Inc. Transport Option	Not Applicable	Not Applicable	Pending 510 (k) clearance, expected January 1999. The Freedom Designs, Inc. Transport Option consists of four securement brackets that meet the proposed ANSI/RESNA WC 19 Standard for Wheelchairs Used As Seat in Motor Vehicle. Will be available on Spectrum 1 and Spectrum 3 frames (standard, front wheel drive and folding tilt configurations), Small Fry models and some Invacare Mobility Systems. Factory Installed with approved Freedom Designs, Inc. components ONLY. Installation of tiedown or restraint systems are not offered by Freedom designs, Inc. Crash tested with Tiedowns that meet the SAE J2249 standard for Wheelchair Occupant and Restraint systems. Recommend use of approved SAE J2249 Tiedown systems ONLY.

Price range categories:

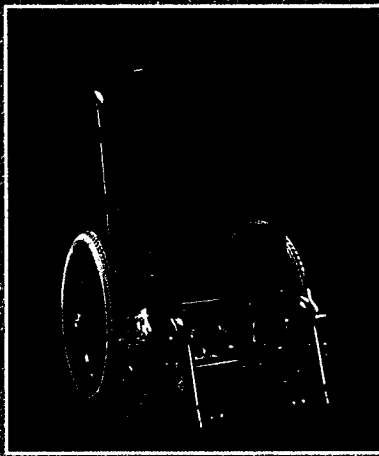
Purchasing programs for professionals or community programs:

Product name	Under \$50	\$51 – \$200	\$201 – \$500	\$501 – over
Call Manufacturer for Product Options and Pricing				

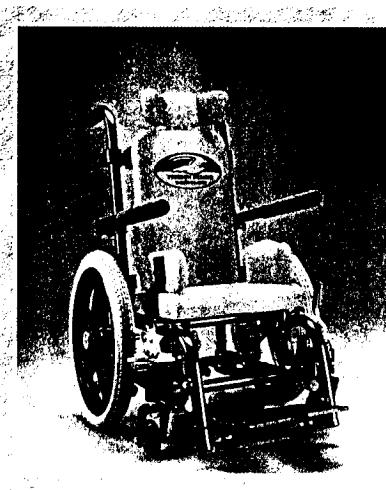
Other manufacturer comments regarding issues for medical/disability clinicians and safety specialists?

For information regarding Freedom Design Seating and Positioning systems tested with the Transport Option, call (800) 331-8551

For information regarding Invacare Mobility Systems that have been tested with the Freedom Designs Transport Option (approved for use with Invacare Allegro and Orbit), call (800) 333-6900 ext. 6787



Freedom Designs, Inc.
Wheelchair Catalog



Spectrum 1 Wheelchair

The Spectrum 1 wheelchair is an extremely adjustable, as well as a versatile frame. The Spectrum 1 is designed to meet any and all seating and positioning needs, as well as fulfill growth needs. This fixed front end frame, offers many options to complete its package. Some of those options include: front wheel drive or standard configuration, folding or rigid frame, as well as being "built to tilt". The chair is avail-

able from 10 wide to 18 wide and folds down flat in the folding configuration. For quality of workmanship, convenience, and durability, the Spectrum does it all!



Floor To Seat Rail	Caster Size	Wheel Size	Arc Over Rail
11.5 inches	3 inches	16 inches	4.5 inches
12 inches	3 inches	16 inches	4 inches
12.5 inches	3 inches	16 inches	3.5 inches
12.5 inches	3 inches	18 inches	5.5 inches
13 inches	3 inches	16 inches	3 inches
13 inches	3 inches	18 inches	5 inches
13.5 inches	3 inches	18 inches	4.5 inches
14 inches	3 inches	18 inches	4 inches
14 inches	5 inches	20 inches	6 inches
14.5 inches	5 inches	18 inches	3.5 inches
14.5 inches	3 inches	20 inches	5.5 inches
14.5 inches	5 inches	20 inches	5.5 inches
15 inches	3 inches	20 inches	5 inches
15 inches	5 inches	20 inches	5 inches
15 inches	5 inches	22 inches	7 inches
15.5 inches	5 inches	20 inches	4.5 inches
15.5 inches	5 inches	22 inches	4.5 inches
15.5 inches	6 inches	20 inches	4.5 inches
15.5 inches	6 inches	22 inches	6.5 inches
16 inches	5 inches	20 inches	4 inches
16 inches	5 inches	22 inches	6 inches
16 inches	6 inches	20 inches	4 inches
16 inches	6 inches	22 inches	6 inches
16 inches	6 inches	24 inches	8 inches
16.5 inches	6 inches	22 inches	5.5 inches
16.5 inches	6 inches	24 inches	7.5 inches
16.5 inches	7 inches	22 inches	5.5 inches
16.5 inches	7 inches	24 inches	7.5 inches
17 inches	6 inches	22 inches	5 inches
17 inches	6 inches	24 inches	7 inches
17 inches	7 inches	22 inches	5 inches
17 inches	7 inches	24 inches	7 inches

Spectrum Dimensions

Frame Widths	10-18	Both frames
Frame Depths	8-17	Short frame
Frame Depths	12-22	Long frame
Leg Drop	6-21	Short and Long based on 2" cushion
Backrests	19, 23, 26	
Maximum Weight	250 lbs.	
Minimum Weight	25 lbs.	



Spectrum 3 Wheelchair

The Spectrum 3 wheelchair has it all! Swing-away front end, folding or rigid frame, tilt in space, front wheel drive or standard, growth capabilities, as well as anodized hot colors, are some of the exciting options this frame has! Built for seating and positioning systems, too, this makes the Spectrum 3 the most versatile chair in the world! The Spectrum 3 offers limitless possibilities, as well as quality workmanship!



Front wheel drive configuration

STANDARD DIMENSIONS

Floor To Seat Rail	Caster Size	Wheel Size	Arc Over Rail
11.5 inches	3 inches	16 inches	4.5 inches
12 inches	3 inches	16 inches	4 inches
12.5 inches	3 inches	16 inches	3.5 inches
12.5 inches	3 inches	18 inches	5.5 inches
13 inches	3 inches	16 inches	3 inches
13 inches	3 inches	18 inches	5 inches
13.5 inches	3 inches	18 inches	4.5 inches
14 inches	3 inches	18 inches	4 inches
14 inches	5 inches	20 inches	6 inches
14.5 inches	5 inches	18 inches	3.5 inches
14.5 inches	3 inches	20 inches	5.5 inches
14.5 inches	5 inches	20 inches	5.5 inches
15 inches	3 inches	20 inches	5 inches
15 inches	5 inches	20 inches	5 inches
15 inches	5 inches	22 inches	7 inches
15.5 inches	5 inches	20 inches	4.5 inches
15.5 inches	5 inches	22 inches	4.5 inches
15.5 inches	6 inches	20 inches	4.5 inches
15.5 inches	6 inches	22 inches	6.5 inches
16 inches	5 inches	20 inches	4 inches
16 inches	5 inches	22 inches	6 inches
16 inches	6 inches	20 inches	4 inches
16 inches	6 inches	22 inches	6 inches
16 inches	6 inches	24 inches	8 inches
16.5 inches	6 inches	22 inches	5.5 inches
16.5 inches	6 inches	24 inches	7.5 inches
16.5 inches	7 inches	22 inches	5.5 inches
16.5 inches	7 inches	24 inches	7.5 inches
17 inches	6 inches	22 inches	5 inches
17 inches	6 inches	24 inches	7 inches
17 inches	7 inches	22 inches	5 inches
17 inches	7 inches	24 inches	7 inches

Spectrum 3 Dimensions

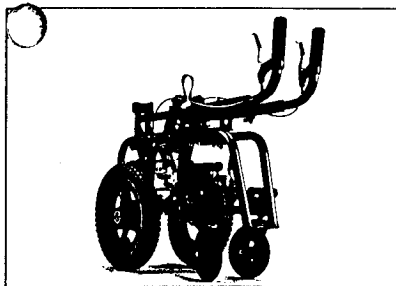
Frame Widths	10-18	Both frames
Frame Depths	10-18	Short frame
Frame Depths	12-22	Long frame
Leg Drop	6-21	Short and Long based on 2" cushion
Back Chairs	19 23 26	
High Back W/optional	20 24 28	
Low Back W/optional	20 24	



"Built To Tilt"

"Folding Tilt" is an innovative addition to the Spectrum line of wheelchairs. This new design modifies the Spectrum chairs to achieve maximum tilt. Easy 2-step removal of the seating system, along with the versatile lateral folding capabilities of our Spectrum chairs, makes this the most convenient, lightweight, and adjustable tilt in space frame on the market. The Spectrum frame with the "Tilt In Space" option sets a new standard in versatility and adjustability for wheelchair frames that is unsurpassed.





Floor To Seat Rail	Caster Size	Wheel Size	Arc Over Rail
13.5 inches	3 inches	16 inches	4.5 inches
14 inches	3 inches	16 inches	4 inches
14.5 inches	3 inches	16 inches	3.5 inches
14.5 inches	3 inches	18 inches	5.5 inches
15 inches	3 inches	16 inches	3 inches
15 inches	3 inches	18 inches	5 inches
15.5 inches	3 inches	18 inches	4.5 inches
16 inches	3 inches	18 inches	4 inches
16 inches	5 inches	20 inches	6 inches
16.5 inches	5 inches	18 inches	3.5 inches
16.5 inches	3 inches	20 inches	5.5 inches
16.5 inches	5 inches	20 inches	5.5 inches
17 inches	3 inches	20 inches	5 inches
17 inches	5 inches	20 inches	5 inches
17 inches	5 inches	22 inches	7 inches
17.5 inches	5 inches	20 inches	4.5 inches
17.5 inches	5 inches	22 inches	4.5 inches
17.5 inches	6 inches	20 inches	4.5 inches
17.5 inches	6 inches	22 inches	6.5 inches
18 inches	5 inches	20 inches	4 inches
18 inches	5 inches	22 inches	6 inches
18 inches	6 inches	20 inches	4 inches
18 inches	6 inches	22 inches	6 inches
18 inches	6 inches	24 inches	8 inches
18.5 inches	6 inches	22 inches	5.5 inches
18.5 inches	6 inches	24 inches	7.5 inches
18.5 inches	7 inches	22 inches	5.5 inches
18.5 inches	7 inches	24 inches	7.5 inches
19 inches	6 inches	22 inches	5 inches
19 inches	6 inches	24 inches	7 inches
19 inches	7 inches	22 inches	5 inches
19 inches	7 inches	24 inches	7 inches

Frame Widths	10-18	Short and long frame
Frame Depths	8-17	Short frame
Frame Depths	12-22	Long frame
Leg Drop	8-24	Short and long based on 2" cushion
Backrests	15-24	
Footrests	10-24	



Spirit Wheelchair

We Have the Spirit, YES WE DO! The Spirit wheelchair is a wonderful addition to the Spectrum line. The Spirit comes in widths of 10 wide to 18 wide with seat depth adjustments to 20 deep. Height adjustable back canes, swing-away front resting, swing-away tubular arms and anodized bright colors, make this frame a solid choice. Versatility, quality and adjustability can be yours with the new "Spirit" from Freedom Designs, Inc.



Spirit Wheel Options

Floor To Seat Rail	Caster Size	Wheel Size	Arc Over Rail
13.5 inches	3 inches	16 inches	4.5 inches
14 inches	3 inches	16 inches	4 inches
14.5 inches	3 inches	16 inches	3.5 inches
14.5 inches	3 inches	18 inches	5.5 inches
15 inches	3 inches	16 inches	3 inches
15 inches	3 inches	18 inches	5 inches
15.5 inches	3 inches	18 inches	4.5 inches
16 inches	3 inches	18 inches	4 inches
16 inches	5 inches	20 inches	6 inches
16.5 inches	5 inches	18 inches	3.5 inches
16.5 inches	3 inches	20 inches	5.5 inches
16.5 inches	5 inches	20 inches	5.5 inches
17 inches	3 inches	20 inches	5 inches
17 inches	5 inches	20 inches	5 inches
17 inches	5 inches	22 inches	7 inches
17.5 inches	5 inches	20 inches	4.5 inches
17.5 inches	5 inches	22 inches	4.5 inches
17.5 inches	6 inches	20 inches	4.5 inches
17.5 inches	6 inches	22 inches	6.5 inches
18 inches	5 inches	20 inches	4 inches
18 inches	5 inches	22 inches	6 inches
18 inches	6 inches	20 inches	4 inches
18 inches	6 inches	22 inches	6 inches
18 inches	6 inches	24 inches	8 inches
18.5 inches	6 inches	22 inches	5.5 inches
18.5 inches	6 inches	24 inches	7.5 inches
18.5 inches	7 inches	22 inches	5.5 inches
18.5 inches	7 inches	24 inches	7.5 inches
19 inches	6 inches	22 inches	5 inches
19 inches	6 inches	24 inches	7 inches
19 inches	7 inches	22 inches	5 inches
19 inches	7 inches	24 inches	7 inches

Spirit Dimensions

Frame Widths	10-18
Frame Depths	10-14
Frame Depths	15-20
Leg Drop	6-14
Leg Drop	14-19
Back Canes	10-14
Rider's Weight	250 lbs
Frame Weight	20 lbs

Short and long frame
Short frame (10"/11" w/ 1"-2" back)
Long frame(15" w/ 1" back cushion)
90 Degree hanger
75 Degree hanger
Taller can be requested



"Small Fry" Wheelchair

The Spectrum line of wheelchairs introduces its new "Small Fry" wheelchair frame. This innovative, versatile design

allows the lowest seat to floor height frame on the market, with the same exceptional features included in the rest of the Spectrum line of quality frames. The "Small Fry" comes in a rigid style frame with a fixed front end and a variety of widths available for future growth. Seating and positioning needs can easily be fulfilled on this frame. The "Small Fry"

is built for maximum performance, convenience and versatility. The Spectrum is built to last!



Floor To Seat Rail	Caster Size	Wheel Size	Arc Over wheel	Fork Size
9.5 inches	3 inches	16 inches	6 inches	short
10 inches	3 inches	16 inches	5.5 inches	short
10.5 inches	3 inches	16 inches	5 inches	short
10.5 inches	3 inches	18 inches	7 inches	short
12.5 inches	5 inches	18 inches	5 inches	long
13 inches	5 inches	18 inches	4.5 inches	long
13.5 inches	5 inches	18 inches	4 inches	long
12.5 inches	5 inches	20 inches	7 inches	long
13 inches	5 inches	20 inches	6.5 inches	long
13.5 inches	5 inches	20 inches	6 inches	long

Small Fry Dimensions

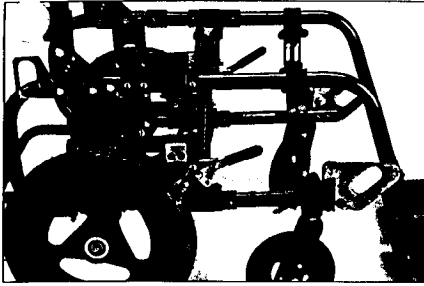
Frame Widths	10-18
Frame Depths	4-13 flush cane mount
Leg Drop	6-10 with flip up footplates or one piece one piece footboard
Leg Drop	3-10 with 1 piece footboard with 1's
Back Cane	19, 24, 26
Rider's Weight	200 lbs
Frame Weight	25 lbs

Footboard height 16 inches or less



Transport Option





The "Transport Option"

Freedom Designs, Inc. is proud to announce another option to our extensive product line - the "Transport Option" - for our Spectrum line of wheelchairs. This option addresses the challenges of safe transport of wheelchair riders. Securement point bracketry for SAE J2249 approved tie-downs are attached to our Spectrum 1 & Spectrum 3 frames. The "Transport Option," on our Spectrum frames, has been tested and passed, according to ANSI/RESNA WC-19 standards, at the University of Michigan Transportation Research Institute. The frames that were tested were Spectrum 1 and Spectrum 3 in standard configuration and Spectrum 1 and Spectrum 3 in front wheel drive configuration. The following seating components were also tested and passed, on our Spectrum frames:

Econo-Eze Transport Solid Seat

Econo-Eze Transport Solid Back

Lateral Thigh Guides - Fixed

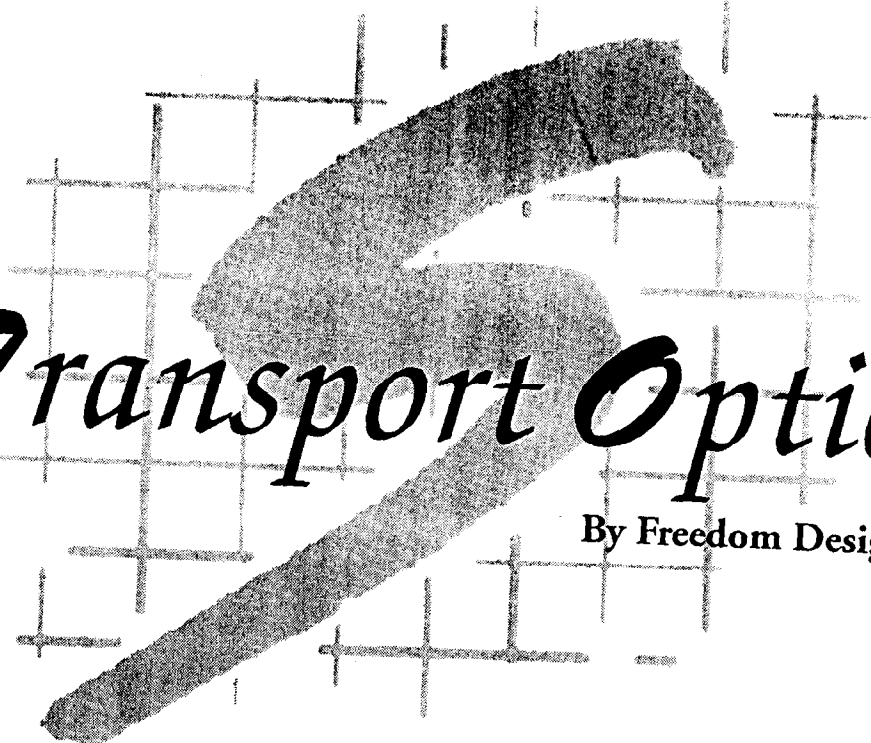
Lateral Thoracic Supports - Fixed

Horizontal/Vertical Adjustable Headrest

Maximum Rider's Weight 168 lbs

These components and "Transport Option" bracketry is a factory installation on our Spectrum chairs. The "Transport Option," offered by "Freedom Designs, Inc., is a step forward in the effort to improve the safety of wheelchair users.





Transport Option

By Freedom Designs, Inc.



FREEDOM DESIGNS, INC.®

2241 Madera Rd., Simi Valley, CA 93065 • (800)331-8551 • (805)582-0077 • FAX: (805)582-1509

Announcing Freedom Designs, Inc. Transport Option



installed on Invacare Wheelchairs!!!!

Freedom Designs, Inc. Transport Option Seating is now available on Invacare Allegro and Orbit Wheelchairs. These chairs with limited Freedom Designs, Inc. seating options have been frontal impact tested and passed at the University of Michigan Transportation and Research Institute. Invacare Allegro and Orbit frames need to be drop shipped to Freedom Designs, Inc. for factory installation of this new Transport Option.

See the Freedom Designs, Inc. Transport Option information and Price List Booklet for Seating Options that are available. Call Freedom Designs, Inc. Customer Service at 1-800-331-8551 for details.

FDI-11/12/98

Transport Option

Freedom Designs, Inc. is now offering the new Transport Option, available on our Spectrum 1 and Spectrum 3 wheelchair frames. This option was designed and tested following the ANSI/RESNA WC-19 Wheelchair Standards. Following is information regarding this testing.

ANSI/RESNA WC-19

This is a set of standards with the following purpose: “The purpose of this ANSI/RESNA standard is to promote occupant safety and reduce the risk of injury for motor-vehicle occupants who remain seated in their wheelchair during transit. This standard makes use of basic principles of occupant protection and accepted procedures for dynamic testing, to establish design and performance requirements for wheelchairs that will be used as seats by their occupants when traveling in a motor vehicle.”

“This ANSI/RESNA standard (WC-19) specifies general design requirements, test procedures and performance requirements for wheelchairs that are designed for use by their occupants as forward-facing seats in a motor vehicle. The provisions of this standard apply to wheelchairs that may be used for seating in a wide range of transportation modes and vehicle types, including bus transit, paratransit, school bus, over-the-road coaches, and personally licensed vehicles. THE STANDARD APPLIES TO WHEELCHAIRS THAT ARE DESIGNED FOR CHILDREN WITH A BODY MASS OF 22 KG OR MORE (ABOUT 6 YEARS OLD. 51 LBS.) AS WELL AS FOR WHEELCHAIRS DESIGNED FOR ADULTS.

Test Specifications:

- **Test done at the University of Michigan Transportation Research Institute in Ann Arbor, MI.
- **Test was a frontal impact test at 30 mph. with the wheelchair facing forward.
- **Test was done on an impact sled with a flat, structurally rigid, horizontal platform, suitable reinforced to accept anchorages of the surrogate tiedown, and capable of producing the impact conditions.
- **The Anthropomorphic Test Dummy, (ATD), for all tests was 168 lbs.
- **WC/19 Design requirements state that: “The wheelchair shall be designed to reduce the likelihood of injuries due to contact with the wheelchair components by providing energy-absorbing padding over all rigid and sharp-edges likely to be contacted by the wheelchair user and other vehicle occupants during a vehicle impact.
- **All Transport Option hardware designed to the specifications listed in ANSI/ RESNA WC-19.
- **Configuration and components tested on each chair are listed in test summaries.

Wheelchair Configurations for each test:

- Test#9801 - Spectrum 1 Wheelchair in Standard Configuration equipped with Solid Seat, Solid Back and EE1/EE2 Hardware, loaded with a Midsize-Male ATD. Total Mass-49 lbs.
Size-16 x 16 Minimum Turning Radius-28” Minimum Turn Around-52”
- Test#9802 - Spectrum 3 Wheelchair in Standard Configuration equipped with Solid Seat, Solid Back and EE1/EE2 Hardware Loaded with a Midsize-Male ATD. Total Mass-55 lbs.
Size-16 x 16 Minimum Turning Radius-31” Minimum Turn Around-57”
- Test#9803 - Spectrum 1 Wheelchair in Standard Configuration Equipped with Solid Seat, Solid Back, EE1/EE2 Hardware, Lateral Hip Guides, Lateral Thoracic Supports and Headrest Support Loaded with a Midsize-Male ATD. Total Mass-55 lbs.
Size-16 x 16 Minimum Turning Radius-28” Minimum Turn Around-52”

- Test#9804 - Spectrum 3 Wheelchair in Front Wheel Drive Configuration Equipped with Solid Seat, Solid Back, EE1/EE2 Hardware, Lateral Hip Guides, Lateral Thoracic Supports and Headrest Support Loaded with a Midsize-Male ATD. Total mass-56 lbs.
Size-16 x 16 Minimum Turning Radius-21" Minimum Turn Around-45"
- Test#9805 - Spectrum 3 Wheelchair in Standard Configuration with Solid Seat, Solid Back, EE1/EE2 Hardware, Lateral Hip Guides, Lateral Thoracic Supports and Headrest Support Loaded with a Midsize-Male ATD. Total Mass-58 lbs.
Size-16 x 16 Minimum Turning Radius-31" Minimum Turn Around-57"
- Test#9806 - Spectrum 1 Wheelchair in Front Wheel Drive Configuration Equipped with Solid Seat, Solid Back, EE1/EE2 Hardware, Lateral Hip Guides, Lateral Thoracic Supports and Headrest Support Loaded with a Midsize-Male ATD. Total Mass-56 lbs.
Size-16 x 16 Minimum Turning Radius-21" Minimum Turn Around-45"
- Test#9807 - Spectrum 3 Wheelchair in Front Wheel Drive Configuration with 3" Caster Wheels, Equipped with Solid Seat, Solid Back, EE1/EE2 Hardware, Lateral Hip Guides, Lateral Thoracic Supports and Headrest Support Loaded with a Midsize-Male ATD.
Total Mass-56 lbs.
Size-16 x 16 Minimum Turning Radius-21" Minimum Turn Around-45"

FDI Transport Option Specifications:

- **The Transport Option must be used in conjunction with approved Wheelchair Tiedown and Occupant Restraints.
- **The FDI Transport Option is only available on Spectrum 1 and Spectrum 3 Wheelchairs in the configurations tested.
- **Lateral Thoracic Supports, Lateral Hip Guides and Headrests have been tested and approved for FDI Transport Option seating system.
- **Standard adjustments may be made to Spectrums and seating systems.
- **Other manufacturer's ancillary products have not been tested or approved to be placed on any Freedom Designs, Inc. Transport Option Wheelchairs or seating systems.
- **Spectrums 1 and Spectrum 3 Wheelchairs can be grown in the field with X-Brace change.

User Instructions

1. The Spectrum wheelchair conforms with the requirements of ANSI/RESNA WC/19.
2. **WARNING:** Wheelchair users should transfer to the vehicle seat and use the vehicle-installed restraint system when this is feasible.
3. The ANSI/RESNA WC/19 standards apply to persons with a weight of 51 lbs. to 169 lbs. This constitutes the range of sizes for which the Spectrum wheelchair is suitable for occupancy in a motor vehicle.
4. Following is a picture showing the locations of all wheelchair securement points used in the frontal impact test.

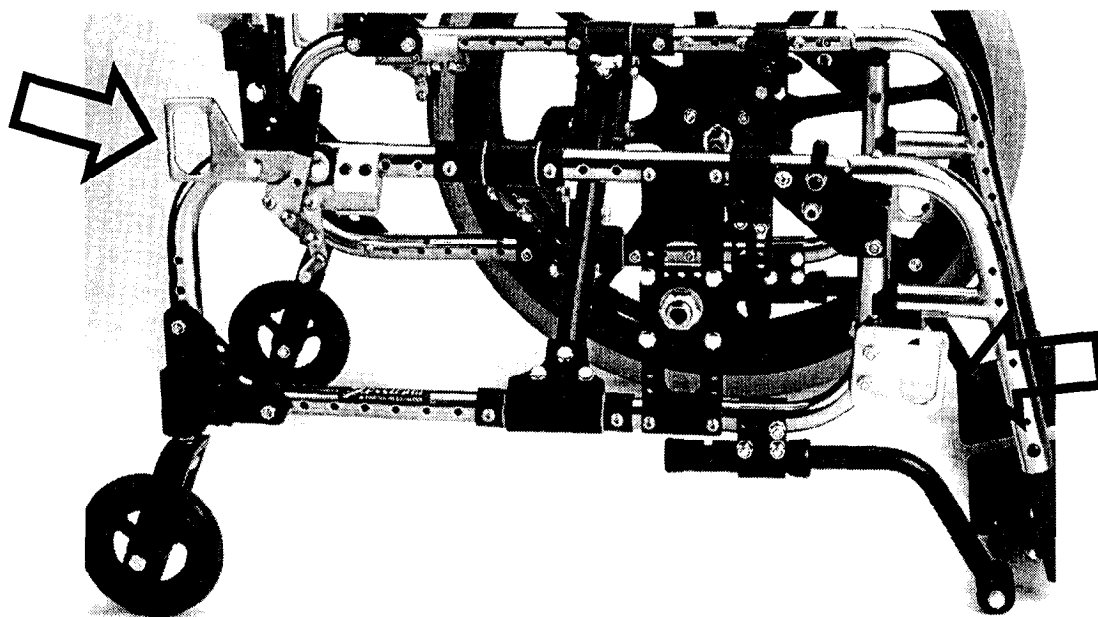


Exhibit 1

5. The Spectrum wheelchair should be tied down in a motor vehicle using approved SAE J2249 restraints in accordance with the manufacturer's instructions and in conjunction with the securement points on the wheelchair in the picture above.

6. Attach occupant restraints in accordance with the manufacturer's instructions and SAE J2249.
7. Correct positioning of occupant restraint belts on the user are:
 - a. The pelvic belt should be worn low across the front of the pelvis, so that the angle of the pelvic belt is within the zone of 45 to 75 degrees to the horizontal, as shown in exhibit 2:

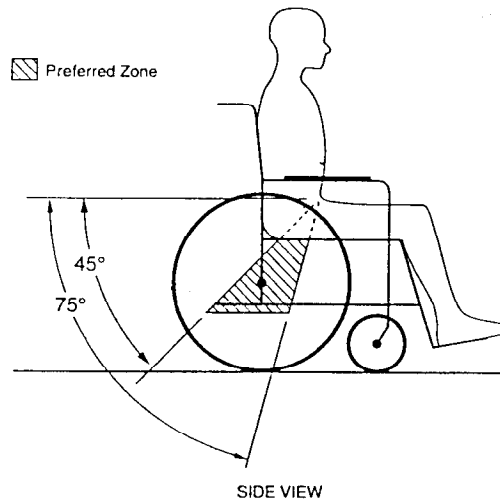


Exhibit 2 - Zones of preferred angles for pelvic belts.

- b. Belt restraints should not be held away from the body by wheelchair components or parts, wheelchair armrests or wheels see exhibit 3.
- c. Upper torso restraints should fit over the shoulder or shoulders.
- d. Belt restraints should be adjusted as firmly as possible, consistent with user comfort.
- e. Belt webbing should not be worn twisted.

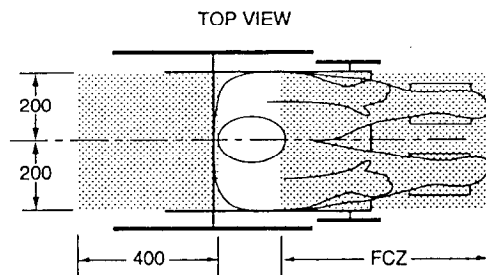


Exhibit 3

Users Warnings

1. **WARNING:** The wheelchair should be used only for forward-facing seating in motor vehicles.
2. **WARNING:** The wheelchair should be used as indicated in the Freedom Designs, Inc. instructions.
3. **WARNING:** The wheelchair has been dynamically tested in a forward-facing mode with the ATD restrained by both pelvic and shoulder belts, and that both pelvic and upper torso belts should be used to reduce the possibility of head and chest impacts with vehicle occupants.
4. **WARNING:** The Spectrum 1 and Spectrum 3 wheelchairs are equipped and have been dynamically tested with, wheelchair-anchored pelvic and/or upper-torso restraints.
5. **WARNING:** When possible, in order to reduce the potential for injury to vehicle occupants, auxiliary wheelchair equipment should be effectively secured to the wheelchair, or removed from the wheelchair and secured in the vehicle, during transit, so that it does not break free and cause injury to vehicle occupants in a crash.
6. **WARNING:** In order to reduce the potential of injury to vehicle occupants, wheelchair mounted trays not specifically designed for crash safety should:
 - a. Be removed and secured separately in the vehicle, or
 - b. Be secured to the wheelchair but positioned away from the occupant with energy-absorbing padding placed between the tray and the occupant.
7. **WARNING:** Postural Supports and belts may be used in a moving vehicle in addition to the occupant belt restraint, but should not be relied on in place of occupant restraints that have been designed and tested for this purpose.
8. **WARNING:** Freedom Designs, Inc. should be consulted in case of questions about using the wheelchair for seating in a motor vehicle.
9. **WARNING:** Alterations or substitutions should not be made to the wheelchair structural and frame parts or components without consulting with Freedom Designs, Inc..
10. **WARNING:** Both upper and lower torso belts should be provided and used to achieve effective occupant restraint and optimum protection in a crash situation.

10. **WARNING:** The recommended clear zones for occupants restrained by both pelvic and shoulder restraints, and only by pelvic restraints, is seen in exhibit 4. The frontal clear zones need to be larger when upper torso belts are not used.



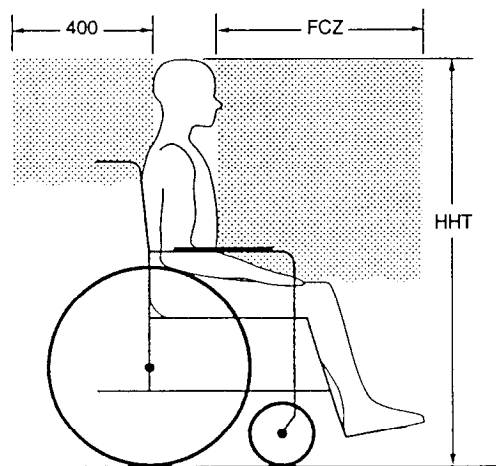
Notes:

The rear clear zone is measured from the rearmost point on an occupant's head. The front clear zone is measured from the frontmost point on an occupant's head.

HHT is the estimated seated height from the wheelchair ground plane to the top of the wheelchair-seated occupant's head.

HHTs range from about 1200 mm for a small adult female, to about 1550 mm for a tall adult male.

The frontal clear zone may not be achievable for wheelchair-seated drivers.



FCZ = 650 mm with upper torso restraint
= 950 mm with only pelvic restraint

SIDE VIEW

Dimensions shown are in millimeters

Exhibit 4 - Clear zones for wheelchair-seated occupants.

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Transport Option
Frontal Impact Sample Test Results - Spectrum 1

Test Set-Up

Frontal Impact of a Spectrum 1 Wheelchair in Standard Configuration Equipped with Solid Seat, Solid Back and EE1/EE2 Hardware, Loaded with a Midsize-Male ATD.

The Freedom Designs, Inc. Spectrum 1 wheelchair in standard configuration, equipped with solid seat, solid back and EE1/EE2 hardware was placed on the sled platform facing forward and secured using the surrogate four-point, strap-type tiedown. The front tiedown straps were hooked to the securement points provided at the top of the front wheel casters. The rear tiedown straps were hooked to the securement points provided on the back of the seat frame at the junction of the seat and seatback frame support members.

The wheelchair was loaded with a midsize-male ATD, (Anthropomorphic Test Dummy), that was restrained by an independent* surrogate three point belt. The pelvic belt was tightened to fit snugly over the ATD pelvic region. The shoulder belt was tightened snugly across the ATD chest with a 75-mm block between the belt and ATD, and the 75-mm block was removed prior to the test.

The test was conducted using 48-kph, (30 mph) and 20-g average impact conditions to determine the frontal-impact response of the wheelchair. The following table provides further details about the test equipment setup and results.

*An independent occupant restraint anchors to the sled platform rather than to the wheelchair.

Summary of Test Results

General Test Information:

Test #	FR 9801
Test dummy weight	76.4 kg (168 lb.)
Actual impact velocity	49.3 kph (30.6 mph)
Actual average sled deceleration level	20.1 g
Actual peak sled deceleration level	24.1 g

ATD Measurements:

Peak resultant chest acceleration	47 g
Maximum forward head excursion	12.8 in.
Maximum forward knee excursion	8.8 in.

Tiedown Loads:

Peak left-rear tiedown strap force	1596 lb.
Peak right-rear tiedown strap force	1453 lb.

Wheelchair Measurements:

Maximum forward wheelchair excursion	2.7 in.
Maximum forward excursion of front wheel hub	4.3 in.
Maximum forward excursion of rear-wheel hub	4.3 in.

Conclusion of Test Results

The Freedom Designs, Inc. Spectrum 1 wheelchair and components listed above, sustained impact loading intact with minor overall deformation. Both the wheelchair and ATD were in an upright position at the completion of the test and the ATD remained in a seated posture. The wheelchair system supported the ATD throughout the impact event. The seating system remained securely attached to the wheelchair frame.

After the test, the ATD and the wheelchair could be released and removed from the tiedown and occupant restraint system without the use of tools. No noticeable failure, separation, or deformation of wheelchair-securement points was observed.

The results of this test indicate that this wheelchair/seat system meets the requirements for wheelchair dynamic strength specified by the ANSI-RESNA WC/19 draft standard.

FREEDOM DESIGNS, INC.

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Transport Option

Frontal Impact Sample Test Results - Spectrum 3

Test Set-Up

Frontal Impact of a Spectrum 3 Wheelchair in Standard Configuration Equipped with Solid Seat, Solid Back and EE1/EE2 Hardware Loaded with a Midsize-Male ATD.

The Freedom Designs, Inc. Spectrum 3 wheelchair in standard configuration, equipped with solid seat, solid back and EE1/EE2 hardware, was placed on the sled platform facing forward and secured using the surrogate four-point, strap-type tiedown. The front tiedown straps were hooked to the securement points provided at the top of the front wheel casters. The rear tiedown straps were hooked to the securement points provided on the back of the seat frame at the junction of the seat and seatback frame support members.

The wheelchair was loaded with a midsize-male ATD, (Anthropomorphic Test Dummy), that was restrained by an independent* surrogate three point belt. The pelvic belt was tightened to fit snugly over the ATD pelvic region. The shoulder belt was tightened snugly across the ATD chest with a 75-mm block between the belt and ATD, and the 75-mm block was removed prior to the test.

The test was conducted using 48-kph, (30 mph) and 20-g average impact conditions to determine the frontal-impact response of the wheelchair. The following table provides further details about the test equipment setup and results.

*An independent occupant restraint anchors to the sled platform rather than to the wheelchair.

Summary of Test Results

General Test Information:

Test #	FR 9802
Test dummy weight	76.4 kg (168 lb.)
Actual impact velocity	48.9 kph (30.4 mph)
Actual average sled deceleration level	20.4 g
Actual peak sled deceleration level	24.9 g

ATD Measurements:

Peak resultant chest acceleration	48 g
Maximum forward head excursion	11.5 in.
Maximum forward knee excursion	12.4 in.

Tiedown Loads:

Peak left-rear tiedown strap force	1582 lb.
Peak right-rear tiedown strap force	1136 lb.

Wheelchair Measurements:

Maximum forward wheelchair excursion	2.4 in.
Maximum forward excursion of front wheel hub	2.1 in.
Maximum forward excursion of rear-wheel hub	1.8 in.

Conclusion of Test Results

The Freedom Designs, Inc. Spectrum 3 wheelchair and components listed above, sustained impact loading intact with minor overall deformation and moderate deformation of the seat cushion. Both the wheelchair and ATD were in an upright position at the completion of the test and the ATD remained in a seated posture. The wheelchair system supported the ATD throughout the impact event. The seating system remained securely attached to the wheelchair frame.

After the test, the ATD and the wheelchair could be released and removed from the tiedown and occupant restraint system without the use of tools. No noticeable failure, separation, or deformation of wheelchair-securement points was observed.

The results of this test indicate that this wheelchair/seat system meets the requirements for wheelchair dynamic strength specified by the ANSI-RESNA WC-19 draft standard.

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Transport Option
Frontal Impact Sample Test Results - Spectrum 1

Test Set-Up

Frontal Impact of a Spectrum 1 Wheelchair in Standard Configuration Equipped with Solid Seat, Solid Back, EE1/EE2 Hardware, Lateral Hip Guides, Lateral Thoracic Supports, and Headrest Support Loaded with a Midsize-Male ATD.

The Freedom Designs, Inc. Spectrum 1 wheelchair in standard configuration, equipped with solid seat, solid back, EE1/EE2 hardware, lateral hip guides, lateral thoracic support and headrest support, was placed on the sled platform facing forward and secured using the surrogate four-point, strap-type tiedown. The front tiedown straps were hooked to the securement points provided at the top of the front wheel casters. The rear tiedown straps were hooked to the securement points provided on the back of the seat frame at the junction of the seat and seatback frame support members.

The wheelchair was loaded with a midsize-male ATD, (Anthropomorphic Test Dummy), that was restrained by an independent* surrogate three point belt. The pelvic belt was tightened to fit snugly over the ATD pelvic region. The shoulder belt was tightened snugly across the ATD chest with a 75-mm block between the belt and ATD, and the 75-mm block was removed prior to the test.

The test was conducted using 48-kph, (30 mph) and 20-g average impact conditions to determine the frontal-impact response of the wheelchair. The following table provides further details about the test equipment setup and results.

*An independent occupant restraint anchors to the sled platform rather than to the wheelchair.

Summary of Test Results

General Test Information:

Test #	FR 9803
Test dummy weight	76.4 kg (168 lb.)
Actual impact velocity	49.2 kph (30.6 mph)
Actual average sled deceleration level	20.1 g
Actual peak sled deceleration level	25.1 g

ATD Measurements:

Peak resultant chest acceleration	51 g
Maximum forward head excursion	10.5 in.
Maximum forward knee excursion	12.0 in.

Tiedown Loads:

Peak left-rear tiedown strap force	1656 lb.
Peak right-rear tiedown strap force	1389 lb.

Wheelchair Measurements:

Maximum forward wheelchair excursion	6.0 in.
Maximum forward excursion of front wheel hub	1.8 in.
Maximum forward excursion of rear-wheel hub	1.8 in.

Conclusion of Test Results

The Freedom Designs, Inc. Spectrum 1 wheelchair and components listed above, sustained impact loading intact with minor overall deformation. Both the wheelchair and ATD were in an upright position at the completion of the test and the ATD remained in a seated posture. The wheelchair system supported the ATD throughout the impact event. The seating system remained securely attached to the wheelchair frame.

After the test, the ATD and the wheelchair could be released and removed from the tiedown and occupant restraint system without the use of tools. No noticeable failure, separation, or deformation of wheelchair-securement points was observed.

The results of this test indicate that this wheelchair/seat system meets the requirements for wheelchair dynamic strength specified by the ANSI-RESNA WC/19 draft standard.

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Transport Option
Frontal Impact Sample Test Results - Spectrum 3

Test Set-Up

Frontal Impact of a Spectrum 3 Wheelchair in Front Wheel Drive Configuration Equipped with Solid Seat, Solid Back, EE1/EE2 Hardware, Lateral Hip Guides, Lateral Thoracic Supports, and Headrest Support Loaded with a Midsize-Male ATD.

The Freedom Designs, Inc. Spectrum 3 wheelchair in front wheel drive configuration, equipped with solid seat, solid back, EE1/EE2 hardware, lateral hip guides, lateral thoracic support and headrest support, was placed on the sled platform facing forward and secured using the surrogate four-point, strap-type tiedown. The front tiedown straps were hooked to the securement points provided at the top of the front wheel casters. The rear tiedown straps were hooked to the securement points provided on the back of the seat frame at the junction of the seat and seatback frame support members.

The wheelchair was loaded with a midsize-male ATD, (Anthropomorphic Test Dummy), that was restrained by an independent* surrogate three point belt. The pelvic belt was tightened to fit snugly over the ATD pelvic region. The shoulder belt was tightened snugly across the ATD chest with a 75-mm block between the belt and ATD, and the 75-mm block was removed prior to the test.

The test was conducted using 48-kph, (30 mph) and 20-g average impact conditions to determine the frontal-impact response of the wheelchair. The following table provides further details about the test equipment setup and results.

*An independent occupant restraint anchors to the sled platform rather than to the wheelchair.

Summary of Test Results

General Test Information:

Test #	FR 9804
Test dummy weight	76.4 kg (168 lb.)
Actual impact velocity	49.3 kph (30.6 mph)
Actual average sled deceleration level	20.3 g
Actual peak sled deceleration level	25.0 g

ATD Measurements:

Peak resultant chest acceleration	54 g
Maximum forward head excursion	12.9 in.
Maximum forward knee excursion	11.4 in.

Tiedown Loads:

Peak left-rear tiedown strap force	1565 lb.
Peak right-rear tiedown strap force	1486 lb.

Wheelchair Measurements:

Maximum forward wheelchair excursion	7.2 in.
Maximum forward excursion of front wheel hub	6.9 in.
Maximum forward excursion of rear-wheel hub	5.1 in.

Conclusion of Test Results

The Freedom Designs, Inc. Spectrum 3 wheelchair and components listed above, sustained impact loading intact with minor overall deformation and moderate-to-severe deformation of the caster wheel assemblies. Both the wheelchair and ATD were in an upright position at the completion of the test and the ATD remained in a seated posture. The wheelchair system supported the ATD throughout the impact event. The seating system remained securely attached to the wheelchair frame.

After the test, the ATD and the wheelchair could be released and removed from the tiedown and occupant restraint system without the use of tools. No noticeable failure, separation, or deformation of wheelchair-securement points was observed.

The results of this test indicate that this wheelchair/seat system meets the requirements for wheelchair dynamic strength specified by the ANSI-RESNA WC/19 draft standard.

Transport Option
Frontal Impact Sample Test Results - Spectrum 3
Test Set-Up

Frontal Impact of a Spectrum 3 Wheelchair in Standard Configuration Equipped with Solid Seat, Solid Back, EE1/EE2 Hardware, Lateral Hip Guides, Lateral Thoracic Supports, and Headrest Support Loaded with a Midsize-Male ATD.

The Freedom Designs, Inc. Spectrum 3 wheelchair in standard configuration, equipped with solid seat, solid back, EE1/EE2 hardware, lateral hip guides, lateral thoracic support and headrest support, was placed on the sled platform facing forward and secured using the surrogate four-point, strap-type tiedown. The front tiedown straps were hooked to the securement points provided at the top of the front wheel casters. The rear tiedown straps were hooked to the securement points provided on the back of the seat frame at the junction of the seat and seatback frame support members.

The wheelchair was loaded with a midsize-male ATD, (Anthropomorphic Test Dummy), that was restrained by an independent* surrogate three point belt. The pelvic belt was tightened to fit snugly over the ATD pelvic region. The shoulder belt was tightened snugly across the ATD chest with a 75-mm block between the belt and ATD, and the 75-mm block was removed prior to the test.

The test was conducted using 48-kph, (30 mph) and 20-g average impact conditions to determine the frontal-impact response of the wheelchair. The following table provides further details about the test equipment setup and results.

*An independent occupant restraint anchors to the sled platform rather than to the wheelchair.

<u>Summary of Test Results</u>	
General Test Information:	
Test #	FR 9805
Test dummy weight	76.4 kg (168 lb.)
Actual impact velocity	49.0 kph (30.5 mph)
Actual average sled deceleration level	20.0 g
Actual peak sled deceleration level	25.0 g
ATD Measurements:	
Peak resultant chest acceleration	44 g
Maximum forward head excursion	12.3 in.
Maximum forward knee excursion	12.0 in.
Tiedown Loads:	
Peak left-rear tiedown strap force	1825 lb.
Peak right-rear tiedown strap force	1561 lb.
Wheelchair Measurements:	
Maximum forward wheelchair excursion	4.2 in.
Maximum forward excursion of front wheel hub	2.1 in.
Maximum forward excursion of rear-wheel hub	1.8 in.

Conclusion of Test Results

The Freedom Designs, Inc. Spectrum 3 wheelchair and components listed above, sustained impact loading intact with minor overall deformation. Both the wheelchair and ATD were in an upright position at the completion of the test and the ATD remained in a seated posture. The wheelchair system supported the ATD throughout the impact event. The seating system remained securely attached to the wheelchair frame.

After the test, the ATD and the wheelchair could be released and removed from the tiedown and occupant restraint system without the use of tools. No noticeable failure, separation, or deformation of wheelchair-securement points was observed.

The results of this test indicate that this wheelchair/seat system meets the requirements for wheelchair dynamic strength specified by the ANSI-RESNA WC/19 draft standard.

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Transport Option
Frontal Impact Sample Test Results - Spectrum 1
Test Set-Up

Frontal Impact of a Spectrum 1 Wheelchair in Front Wheel Drive Configuration Equipped with Solid Seat, Solid Back, EE1/EE2 Hardware, Lateral Hip Guides, Lateral Thoracic Supports, and Headrest Support Loaded with a Midsize-Male ATD.

The Freedom Designs, Inc. Spectrum 1 wheelchair in front wheel drive configuration, equipped with solid seat, solid back, EE1/EE2 hardware, lateral hip guides, lateral thoracic support and headrest support, was placed on the sled platform facing forward and secured using the surrogate four-point, strap-type tiedown. The front tiedown straps were hooked to the securement points provided at the top of the front wheel casters. The rear tiedown straps were hooked to the securement points provided on the back of the seat frame at the junction of the seat and seatback frame support members.

The wheelchair was loaded with a midsize-male ATD, (Anthropomorphic Test Dummy), that was restrained by an independent* surrogate three point belt. The pelvic belt was tightened to fit snugly over the ATD pelvic region. The shoulder belt was tightened snugly across the ATD chest with a 75-mm block between the belt and ATD, and the 75-mm block was removed prior to the test.

The test was conducted using 48-kph, (30 mph) and 20-g average impact conditions to determine the frontal-impact response of the wheelchair. The following table provides further details about the test equipment setup and results.

*An independent occupant restraint anchors to the sled platform rather than to the wheelchair.

Summary of Test Results

General Test Information:

Test #	FR 9806
Test dummy weight	76.4 kg (168 lb.)
Actual impact velocity	49.3 kph (30.6 mph)
Actual average sled deceleration level	19.9 g
Actual peak sled deceleration level	24.9 g

ATD Measurements:

Peak resultant chest acceleration	52 g
Maximum forward head excursion	11.4 in.
Maximum forward knee excursion	9.9 in.

Tiedown Loads:

Peak left-rear tiedown strap force	1438 lb.
Peak right-rear tiedown strap force	1227 lb.

Wheelchair Measurements:

Maximum forward wheelchair excursion	7.2 in.
Maximum forward excursion of front wheel hub	3.3 in.
Maximum forward excursion of rear-wheel hub	5.4 in.

Conclusion of Test Results

The Freedom Designs, Inc. Spectrum 1 wheelchair and components listed above, sustained impact loading intact with minor overall deformation and moderate deformation of the caster wheel assemblies. Both the wheelchair and ATD were in an upright position at the completion of the test and the ATD remained in a seated posture. The wheelchair system supported the ATD throughout the impact event. The seating system remained securely attached to the wheelchair frame.

After the test, the ATD and the wheelchair could be released and removed from the tiedown and occupant restraint system without the use of tools. No noticeable failure, separation, or deformation of wheelchair-securement points was observed.

The results of this test indicate that this wheelchair/seat system meets the requirements for wheelchair dynamic strength specified by the ANSI-RESNA WC/19 draft standard.

Transport Option Frontal Impact Sample Test Results - Spectrum 3

Test Set-Up

Frontal Impact of a Spectrum 3 Wheelchair in Front Wheel Drive Configuration with 3" Caster Wheels, Equipped with Solid Seat, Solid Back, EE1/EE2 Hardware, Lateral Hip Guides, Lateral Thoracic Supports, and Headrest Support Loaded with a Midsize-Male ATD.

The Freedom Designs, Inc. Spectrum 3 wheelchair in front wheel drive configuration with 3" caster wheels, equipped with solid seat, solid back, EE1/EE2 hardware, lateral hip guides, lateral thoracic support and headrest support, was placed on the sled platform facing forward and secured using the surrogate four-point, strap-type tiedown. The front tiedown straps were hooked to the securement points provided at the top of the front wheel casters. The rear tiedown straps were hooked to the securement points provided on the back of the seat frame at the junction of the seat and seatback frame support members.

The wheelchair was loaded with a midsize-male ATD, (Anthropomorphic Test Dummy), that was restrained by an independent* surrogate three point belt. The pelvic belt was tightened to fit snugly over the ATD pelvic region. The shoulder belt was tightened snugly across the ATD chest with a 75-mm block between the belt and ATD, and the 75-mm block was removed prior to the test.

The test was conducted using 48-kph, (30 mph) and 20-g average impact conditions to determine the frontal-impact response of the wheelchair. The following table provides further details about the test equipment setup and results.

*An independent occupant restraint anchors to the sled platform rather than to the wheelchair.

Summary of Test Results

General Test Information:

Test #	FR 9807
Test dummy weight	76.4 kg (168 lb.)
Actual impact velocity	49.2 kph (30.6 mph)
Actual average sled deceleration level	19.9 g
Actual peak sled deceleration level	24.8 g

ATD Measurements:

Peak resultant chest acceleration	55 g
Maximum forward head excursion	14.1 in.
Maximum forward knee excursion	9.0 in.

Tiedown Loads:

Peak left-rear tiedown strap force	1270 lb.
Peak right-rear tiedown strap force	1333 lb.

Wheelchair Measurements:

Maximum forward wheelchair excursion	4.5 in.
Maximum forward excursion of front wheel hub	1.8 in.
Maximum forward excursion of rear-wheel hub	0.6 in.

Conclusion of Test Results

The Freedom Designs, Inc. Spectrum 3 wheelchair in front wheel drive configuration and components listed above, sustained impact loading intact with minor overall deformation and moderate deformation of the caster wheel assemblies. Both the wheelchair and ATD were in an upright position at the completion of the test and the ATD remained in a seated posture. The wheelchair system supported the ATD throughout the impact event. The seating system remained securely attached to the wheelchair frame.

After the test, the ATD and the wheelchair could be released and removed from the tiedown and occupant restraint system without the use of tools. No noticeable failure, separation, or deformation of wheelchair-securement points was observed.

The results of this test indicate that this wheelchair/seat system meets the requirements for wheelchair dynamic strength specified by the ANSI-RESNA WC/19 draft standard.

FREEDOM DESIGNS, INC.

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TRANSPORT OPTION PRICE LIST

The following parts have been frontal impact tested and are available when ordering the Freedom Designs, Inc. Transport Option:

<u>Part #</u>	<u>Description</u>	<u>Retail</u>
SP1-99999	Spectrum Transport Option (includes all clamps for Approved Wheelchair Tiedowns)	\$200 set
SP3-99999	Spectrum III Transport Option (includes all clamps for Approved Wheelchair Tiedowns)	\$200 set
EE1-14W-TO	Seat-Econo-EZE 14W & under Wheelchair-Transport Hdw.	\$310 ea.
EE1-15W-TO	Seat-Econo-EZE 15W & over Wheelchair-Transport Hdw.	\$395 ea.
EE2-14W-TO	Back-Econo-EZE 14W & Under Wheelchair-Transport Hdw.	\$310 ea.
EE2-15W-TO	Back-Econo-EZE 15W & Over Wheelchair-Transport Hdw.	\$395 ea.
Mod-1A	Phenolic Base	\$98 ea.
Mod-2A	Phenolic Base	\$134 ea.
EE4A	Lateral Hip/Thigh Supports - L Bracket	\$200 pr.
EE4B	Lateral Hip/Thigh Supports - 1", 2" or Reverse Offset	\$200 pr.
EE5A	Thoracic Supports - L Bracket	\$200 pr.
EE5B	Thoracic Supports - 1", 2" or Reverse Offset	\$200 pr.
EE7A	Vertical Adjustable Neck/Head Supports	\$181 ea.

* Modifications: Foam modifications only are available on the Transport option.

INVACARE Corporation

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Ordering (800) 333-6900

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Fax: (440) 366-5549

E-mail: www.invacare.com

Product family at a glance for clinicians:

Popular name for device	Model/Order #	Useful for which diagnoses?
Invacare Pediatric Mobility Systems	Action ORBiT, Action Allegro, Action Ranger X, Junior Storm Series	Various
Invacare Transport Ready Option	By Name- Must be factory installed	Vehicle Occupant Protection

Infection control protocols available? No Warranties available? Yes If yes, description attached? No

History of Medicaid/insurance/state disability purchases for individuals? Yes for mobility systems, No for transport Option If yes, roll call of states attached? All 50

Product specifications at a glance for clinicians:

Device name	Height/Length ranges	Weight ranges	Recline ranges/options	RF range	FF range	Accessories for positioning
Invacare Action ORBIT	10-16" Widths 10-16" Depths	150 lbs.	recline not available with Transport ready option	Not Applicable	Forward Facing for transport only	Invacare Seating and Positioning Freedom Design Seating and Positioning
Invacare Action ALLEGRO	10-16" Widths 10-16" Depths	150 lbs.	recline not available with Transport ready option	Not Applicable	Forward Facing for transport only	Invacare Seating and Positioning Freedom Design Seating and Positioning
Invacare Action Ranger X Junior Storm Series	10-16" Widths 10-16" Depths	150 lbs.	recline not available with Transport ready option	Not Applicable	Forward Facing for transport only	Invacare Seating and Positioning Freedom Design Seating and Positioning

For information regarding Invacare Seating and Positioning Systems that have been tested with the Transport Ready Option, call (800) 333-6900 ext. 6787

For information regarding Freedom Design Seating and Positioning systems tested with the Invacare Transport ready Option, call (800) 331-8551

Product installation specifications at a glance for clinicians:

Appropriate vehicle environments: (check any that apply)

☒ Vans ☒ School buses ☐ Ambulances ☒ Other (specify): Transit vehicles

Product name	Tether needs/ Cam wrap needs	Tether/cam kits standard?	Installation assessment alerts
Invacare Transport Ready Option	Not Applicable	Not Applicable	Pending 510 (k) clearance, expected January 1999. The Invacare Transport Ready Option consists of four securement brackets that meet the proposed ANSI/RESNA WC 19 Standard for Wheelchairs Used As Seat in Motor Vehicle. Will be available on Invacare Action ORBIT, Action ALLEGRO, Action Ranger X Junior Storm Series. Factory Installed ONLY. Installation of tiedown or restraint systems are not offered by Invacare, Corporation. Crash tested with Tiedowns that meet the SAE J2249 standard for Wheelchair Occupant and Restraint systems. Recommend use of approved SAE J2249 Tiedown systems ONLY.

Price range categories:

Purchasing programs for professionals or community programs:

Product name	Under \$50	\$51 – \$200	\$201 – \$500	\$501 – over
Call Manufacturer for Product Options and Pricing				

Other manufacturer comments regarding issues for medical/disability clinicians and safety specialists?



WARNING

IF YOUR WHEELCHAIR IS NOT EQUIPPED WITH THE TRANSPORT READY OPTION:
DO NOT let anyone occupy wheelchair while in a moving motor vehicle.
Occupant **MUST** be moved to an approved motor vehicle seat.
Wheelchair positioning strap(s) are **NOT** intended to prevent an occupant from being thrown from the wheelchair as a result of a sudden stop and/or collision during travel in a motor vehicle.
DO NOT transport wheelchair in front seat of a motor vehicle.
While transporting a wheelchair in a motor vehicle secure it to prevent rolling and/or shifting.

INVACARE TRANSPORT READY OPTION INSTRUCTION MANUAL

INSTRUCTIONS

This wheelchair complies with ANSI/RESNA WC/19.

WARNING

When feasible, wheelchair occupants should transfer to the vehicle seat and use the OEM Vehicle installed restraint system.

Wheelchair occupants **MUST NOT** weigh more than 150 lbs./68 kg..

This wheelchair **MUST** be in a forward facing position during travel in a motor vehicle.

The location of the wheelchair securement points are shown in **FIGURE 1**.

Securement Points

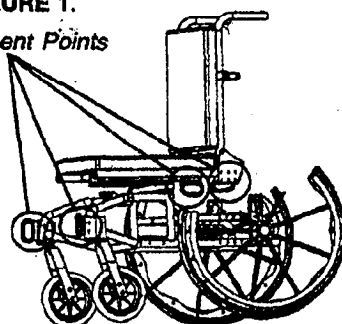


FIGURE 1 - SECUREMENT POINTS

NOTE: To obtain a copy of SAE J2249 Wheelchair Tie-down and Occupant Restraint Systems (WTORS)

for use in Motor Vehicles, please contact: SAE International, 400 Commonwealth Drive, Warrendale, PA 15096, (412) 776-4970.

Attach WTORS to securement points in accordance with the manufacturer's instructions and SAE J2249

This wheelchair is to be used only with WTORS that have been installed in accordance with the manufacturer's instructions and SAE J2249.

Attach wheelchair occupant restraints in accordance with the manufacturer's instructions and SAE J2249.

Correct positioning of occupant restraint belts are shown in **FIGURE 2**.

1. The pelvic belt should be worn low across the front of the pelvis, so that the angle of the pelvic belt is within the preferred zone of 45 to 75 degrees to the horizontal, or the optional zone of 30 to 45 degrees to the horizontal, as shown in **FIGURE 2**.

■ Preferred Zone
■ Optional Zone

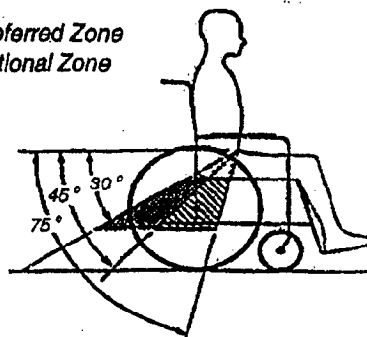


FIGURE 2 - ZONES OF PREFERRED AND OPTIONAL ANGLES FOR PELVIC BELTS

2. Upper torso belt(s) should fit over the shoulder(s).
3. Belt restraints should not be held away from the body by wheelchair components or parts, including but not limited to wheelchair armrests or wheels, as shown in **FIGURE 3**.

*Restraints Should Not Be Held Away From Body
By Wheelchair Components*



FIGURE 3 - FIGURES INDICATING IMPROPER POSITIONING OF OCCUPANT RESTRAINTS

4. Belts should be adjusted as firmly as possible, consistent with user comfort.
5. Belt webbing should not be worn twisted.

This wheelchair has an overall rating of (see chart, **FIGURE 5**) with regard to accommodating the use and fit of **vehicle-anchored** belt restraints. This rating is scored as follows: A = Good to Excellent, B = Fair to Good, C = Poor to Fair.

The test for Lateral Stability Displacement for Point (P) is shown in **FIGURE 4**. The average test result for Point (P) is shown in **FIGURE 5**.

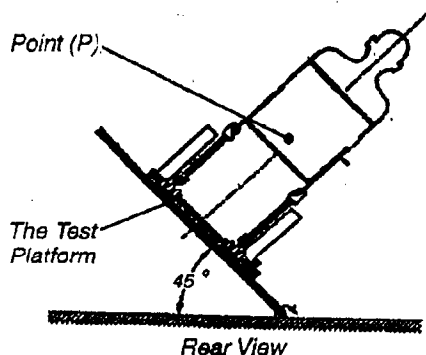


FIGURE 4 - REAR VIEW OF WHEELCHAIR AND HUMAN SURROGATE SECURED ON TEST PLATFORM AND TILTED TO 45 DEGREES

	Overall Rating	Lateral Displacement
Storm Jr.	B	
Allegro		
Orbit		
XXX		
XXX		

FIGURE 5 - OVERALL RATING AND AVERAGE LATERAL DISPLACEMENT TEST RESULTS

⚠ WARNING

This wheelchair has been dynamically tested in a forward-facing mode with the specified crash test dummy restrained by BOTH pelvic and shoulder belts, and that BOTH pelvic and upper torso belt(s) should be used to reduce the possibility of head and chest impacts with vehicle components.

Use only wheelchair tie-down and occupant restraint systems during travel in a Motor Vehicle, (WTORS), which meet the requirements of SAE J2249 recommended practice.

This wheelchair is NOT equipped, and has NOT been dynamically tested to rely on *wheelchair-anchored* pelvic and/or upper torso restraints.

To reduce the potential of injury to vehicle occupants, wheelchair-mounted accessories, including but not limited to IV poles, trays, respiratory equipment, backpacks, and other personal items should be removed and secured separately.

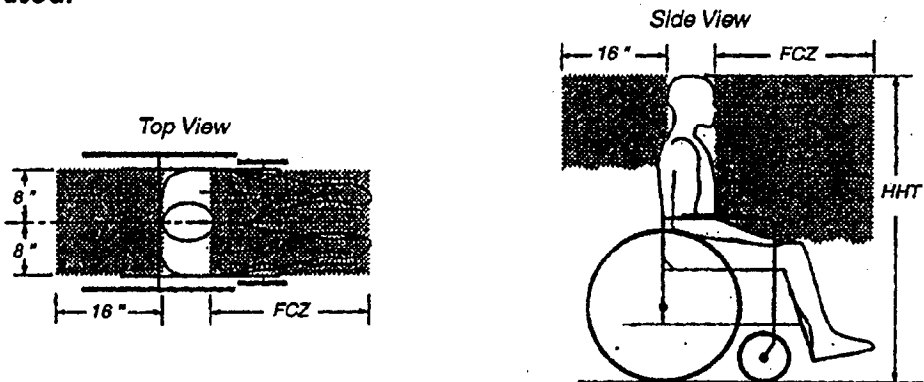
Postural supports, positioning devices, and/or strap(s) should not be relied on for occupant restraint. Wheelchairs with adjustable seat angles **MUST** be set between 0 and 15 degrees. Wheelchairs with reclining backs **MUST** be set and locked in an upright position during travel in a Motor Vehicle.

WARNING

DO NOT alter or substitute wheelchair frame parts, components, or seating systems. Contact Invacare Corporation (1-(800)-333-6900) with any questions about using this wheelchair for seating in a motor vehicle, or for approved seating systems to be used with the Transport Ready Option.

Recommended clear zones for wheelchair seated occupants restrained by BOTH pelvic and shoulder belts and ONLY by pelvic belts as shown in FIGURE 6.

NOTE: Frontal clear zones need to be LARGER when upper torso belt(s) are NOT used.



Dimensions shown are in inches.

Figure 6 - CLEAR ZONES FOR WHEELCHAIR-SEATED OCCUPANTS

NOTES:

The rear clear zone is measured from the rearmost point on an occupant's head. The front clear zone is measured from the frontmost point on an occupant's head. HHT is the estimated seated height from the wheelchair ground plane to the top of the wheelchair-seated occupant's head.

HHTs range from about 47 inches for a small adult female, to about 61 inches for a tall adult male.

The frontal clear zone may not be achievable for wheelchair-seated drivers.

FCZ = 26 inches with pelvic and upper-torso belts, and 37 inches with only a pelvic belt.

NOTE: IT IS STRONGLY RECOMMENDED THAT BOTH PELVIC AND UPPER-TORSO BELT(S) BE USED.

Spill-proof batteries, such as "gel cells", should be installed on wheelchairs to be used during travel in a Motor Vehicle.

A sudden stop and/or collision may structurally damage your wheelchair. Wheelchairs involved in such incidents should be replaced.

MULHOLLAND POSITIONING SYSTEMS, Inc.

215 N. 12th St., PO Box 391
Santa Paula, CA 93061

<http://www.mulhollandinc.com>

Phone: Customer service (805) 525-7165
(800) 543-4769

Fax: (805) 933-1082

E-mail: Mulhpos@ix.netcom.com

Product family at a glance for clinicians:

Popular name for device	Model/Order #	Useful for which diagnoses?
Growth Guidance System (GGS)	Toddler #901-1010002	Cerebral Palsy and other neuromuscular deficits affecting tone and posture
	Youth #901-1020002	same

Infection control protocols or warranties available? Yes If yes, description attached? Yes. Enclosed in manual

History of Medicaid/insurance/state disability purchases for individuals? Yes If yes, roll call of states attached? Yes. All 50 states

Product specifications at a glance for clinicians:

Device name	Height/Length ranges	Weight ranges	Recline ranges/options	RF range	FF range	Accessories for positioning
Growth Guidance System Toddler	Back Height 10-18" Seat Depth 6-14"	12-50 lbs.	Yes, when used as a wheelchair	NO	Forward Facing ONLY as occupant restraint	Head, Trunk and pelvic support wheelchair base
Growth Guidance System Youth	Back Height 14-20" Seat Depth 9-17"	30-50 lbs.	Yes, when used as a wheelchair	NO	Forward Facing ONLY as occupant restraint	same as above

Product installation specifications at a glance for clinicians:

Appropriate vehicle environments: (check any that apply)

☒ Cars, vans, pickups ☒ School buses ☐ Ambulances ☐ Other (specify):

Product name	Tether needs/ Cam wrap needs	Tether/cam kits standard?	Installation assessment alerts
Growth Guidance System with safety harness and tie downs	top tether for car seat use	with safety harness	for use in rear car seat only forward facing only tie downs available for e-track, unwind and flat snap (please specify)

Price range categories:

Purchasing programs for professionals or community programs:

Product name	Under \$50	\$51 – \$200	\$201 – \$500	\$501 – over
Growth Guidance Systems price dependent on postural support needs and sizes (\$3500+ with all postural supports and tilt base)				X
Tie Downs (\$200)		X		
Safety Harness (\$200)		X		

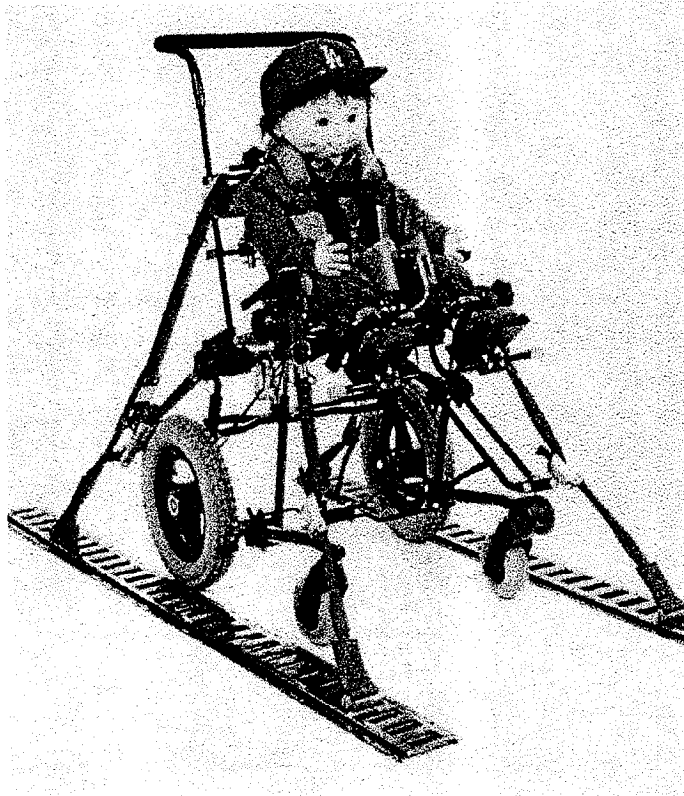
Other manufacturer comments regarding issues for medical/disability clinicians and safety specialists?

The Growth Guidance System is a positioning stroller system which has been safety tested for car seat and van/bus transport with positioning components. It can be separated from the base for car seat use (with safety harness and top tether straps.) For van/bus transport, it remains on the base and requires both the Mulholland Safety Harness System and Tie Downs

Mulholland

GROWTH GUIDANCE SYSTEM™

Transportation Safety Manual



CAUTION!

A child restraint system is only effective if used correctly. Please refer to this manual for proper use of the system. Misuse of the system can render the equipment ineffective.

IMPORTANT!

Vehicle transportation of occupants in the Growth Guidance System™ is only to be in the **forward facing position**. The tie-down system is for use only with the GGS™ tilt base and tie-down straps supplied by Mulholland Positioning Systems™. The system is not designed for, nor has it been tested otherwise. **Do not transport with the tray in place.** Misuse of the product will void the warranty.

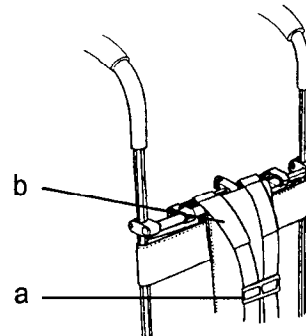
Using This Manual	Page
Part I.....	2
Safety Harness: The safety harness for the Growth Guidance System™ is utilized on both the car seat and transportation tie-down applications. Instructions for its use are outlined in this section	
Part II.....	3
Car Seat: The Growth guidance System™ has been crash tested for use as a car seat for children 50 pounds and under. This section covers the installation of the tether strap and how to secure the chair on a car seat.	
Part III.....	4
Transportation Tie-Down: The tie-down system for the Growth Guidance System™ has been crash tested for children that weigh 50 pounds and under. This section covers the installation and use of the tie-down system.	

I. GROWTH GUIDANCE SYSTEM™ SAFETY HARNESS

The safety harness for the Mulholland Positioning System Growth Guidance System™ is a five point safety belt. Once the child is positioned in the chair place the child's arms under the shoulder straps (b). Make sure the shoulder strap clip (a) is open. Next fasten the straps to the crotch strap buckle (c). Snap the shoulder strap clip closed then tighten the hip belts at the adjustment slide (d). The harness should be snug but you should still be able to fit your finger between the shoulder strap and the child's shoulders.

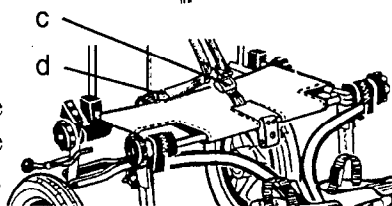
1. Shoulder Strap:

The shoulder straps are fastened to the neckrest mounting bar.



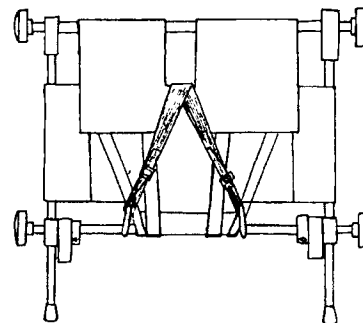
2. Hip Strap:

The hip straps are the lower end of the shoulder straps and are fastened to the steel rings attached to the rear seat bar.



2. Crotch Strap:

The crotch strap comes up through the cut-out in the seat. The ends of the strap fasten to the same rings as the hip straps but are fastened underneath the seat.



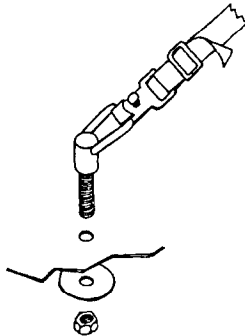
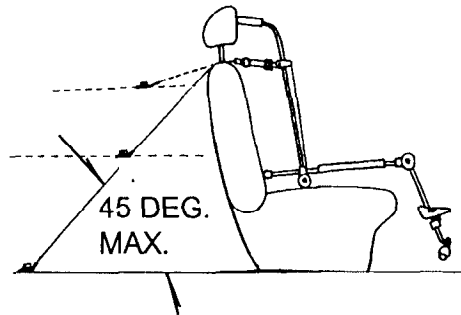
Bottom view of GGS seat

II. GROWTH GUIDANCE SYSTEM™ CAR SEAT

Note: The toddler size GGS™ with harness and carabineers is to be utilized as a car seat for children weighing up to 50 lbs.. The GGS system was crash tested by the University of Michigan (November 15, 1993) within these parameters.

1. Tether strap:

The tether strap must be used to properly secure the GGS™ as a car seat. The strap must be secured to a structurally sound integral metal part of the vehicle. This attachment point should be located directly behind the position of the GGS™ when in use.

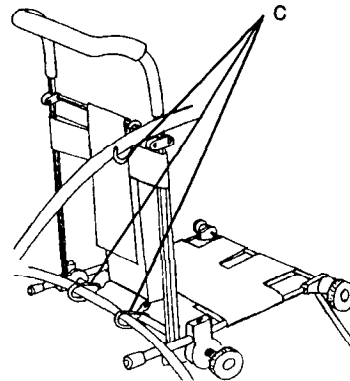


2. Anchor point:

Choose a suitable anchor point as described above. Drill a 1/4" diameter hole at the selected position. Assemble the anchor point as shown making sure to use the large washer underneath the anchor point surface. Make sure to tighten the anchor bolt securely.

3. Lap/shoulder belt attachment:

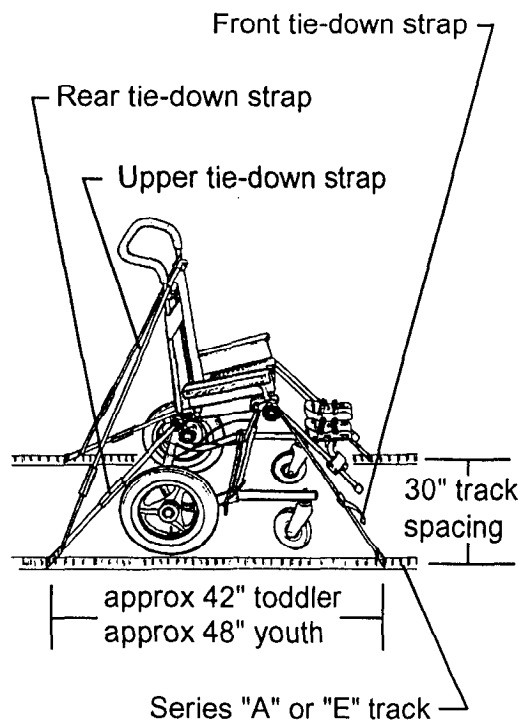
Fasten lap/shoulder belt across the vehicle seat behind the GGS™. The seat belt is fastened to the chair through three carabineer clips (c) as shown on the diagram.



III. GROWTH GUIDANCE SYSTEM™ TRANSPORTATION TIE-DOWN

Note: This system is only intended for use by children 50 pounds and under. The system was crash tested at the University of Michigan on August 27, 1993.

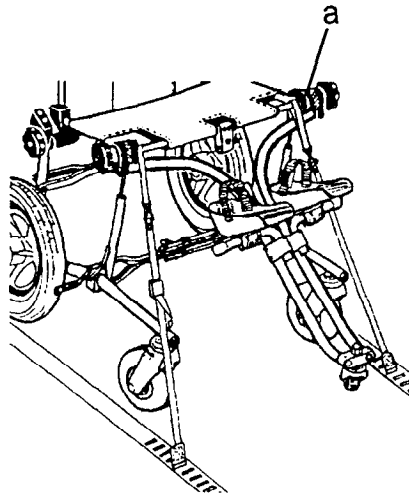
The Tie-Down system for the Mulholland Positioning System's Growth Guidance System GGS™ consists of a 4 point tie-down system with an added upper tether. The system is designed to be used with series "A" or "E" track.



Suggested track layout.

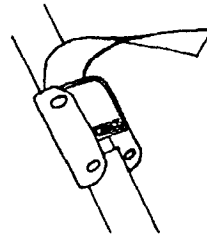
1. Fasten Front Tie-Down Straps

To fasten the front tie-down straps, loop the end of the tie-down strap over the front seat bar just inside of the legrest angle adjustment casting (a). Attach the ring on the end of the strap to the hook sewn into the tie-down strap webbing.



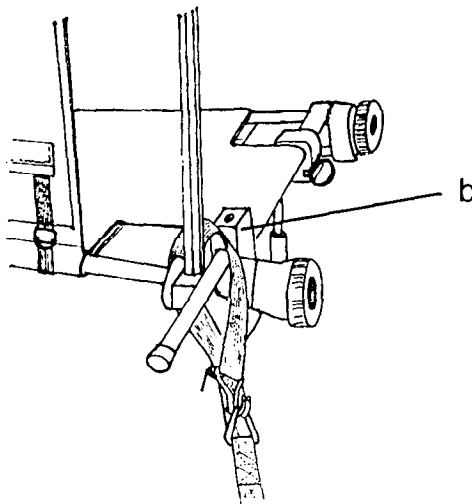
To tighten the tie-down straps, pull on the loose end of the strap. The cam will lock the strap in the desired position.

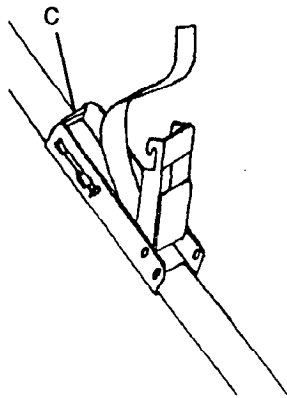
To loosen tie-down straps, press cam where marked "PRESS".



2. Fasten Rear Tie-Down Straps

To fasten the rear tie-down straps, loop the end of the tie-down strap around the rear seat bar and over the top of the tilt adjustment castings (b). Attach the ring on the end of the strap to the hook sewn into the tie-down strap webbing.



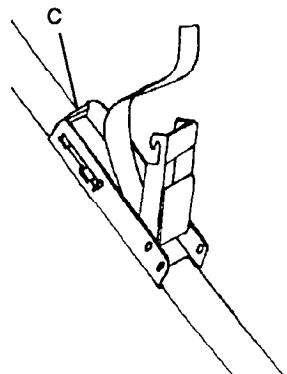
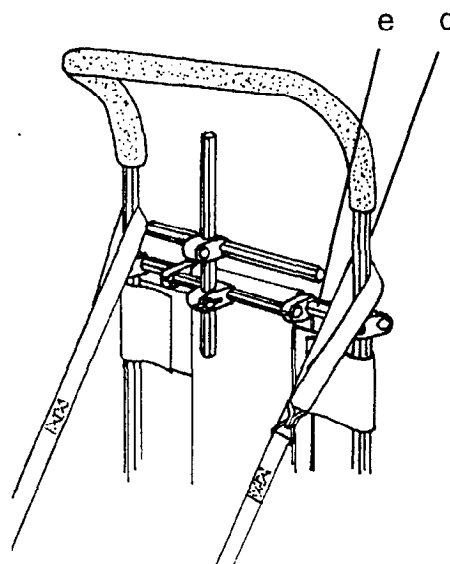


To release the buckle push the tab (c) on the end of the buckle and lift the lever open.

3. Fasten Upper Tie-Down Straps

To fasten the upper tie-down straps, loop the end of the tie-down strap around the back bars (d) of the chair above the upper sling bar(e). Attach the ring on the end of the strap to the hook sewn into the tie-down strap webbing.

Tighten the tie-down strap with the buckle open. As the buckle is closed it will snug up some more on the tie-down strap.



To release the buckle push the tab (c) on the end of the buckle and lift the lever open.

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(800) 543-4769

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9/15/93

THE MULHOLLAND GROWTH GUIDANCE SYSTEM™

When completed, this form will insure a general evaluation of the child's seating needs and assist with the specification of appropriate postural support components. The GGS™ is a "therapy specific" product which, when utilized appropriately, can significantly impact a child's posture and patterns of movement. It can be used as an "extension of the therapist's hands" in providing postural support and developmental challenge.

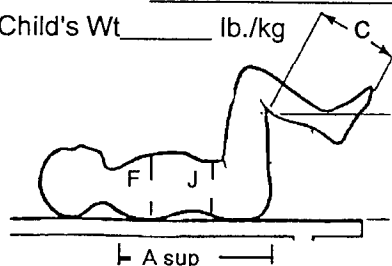
CHILD'S NAME _____ AGE _____ THERAPIST _____
CITY _____ TEL. _____

MEASUREMENT: Measurements should be made in supine and supported sitting. Sitting depth should always be taken in sitting only, with simulation of adequate abduction (each GGS is built to an individual child's measurements -to allow for maximal growth- and a seat depth which is too long will significantly impact a child's spinal alignment and head control).

DIAGNOSIS _____

Child's Wt _____ lb./kg

INCHES/ CM (please circle)



abducted knee width _____

A _____

D _____

I _____

Asup _____

E _____

J _____

B L _____

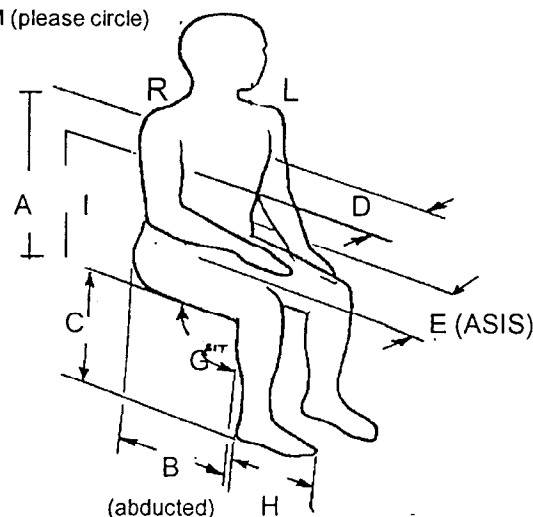
F _____

R _____

Gsit _____ degrees

C _____

H _____



NEURODEVELOPMENTAL STATUS: (please circle)

Muscle Tone spastic flaccid athetoid mixed _____

Child is dominated by primitive reflexes to maintain posture

ATNR R L STNR FLEX EXT TLR PRONE SUPINE

Child exhibits primitive reflexes under motor stress (not obligatory)

ATNR R L STNR FLEX EXT TLR PRONE SUPINE

Child exhibits Righting Reactions

HEAD RIGHTING VESTIBULAR RIGHTING PRONE SUPINE SITTING

PG 2 NAME _____

CHILD'S DEVELOPMENTAL LEVEL: (please circle)				
HEAD CONTROL (with upper trunk supported)				
POOR (briefly holds head up)	MOD (30-60 sec)	GOOD (more than 1 min)		
TRUNK CONTROL (with pelvis supported)				
POOR (cannot support trunk)	MOD (30-60 sec)	GOOD (more than 1 min)		
FINE MOTOR SKILLS--able to reach for objects placed at mid-line				
UNABLE	ATTEMPTS (reflexively)	ATTEMPS (volitionally)	INDEPENDENT	
MOBILITY SKILLS				
NOT MOBILE	ROLLS TO EITHER SIDE	CRAWLS	ASSUMES QUAD	CREEPS
FEEDING SKILLS				
FED BY NG OR GT	FED PUREED ONLY BY SPOON	THICKENED LIQUIDS BY CUP		
THIN LIQUIDS BY CUP	PARTIALLY SELF FEEDS	FEEDS SELF		
ADDITIONAL INFORMATION _____				

ORTHOPAEDIC STATUS:
Contractures _____
Scoliosis (describe) _____
Post-Operative Hx _____
Orthotics _____
Other Pertinent Information _____

CHILD'S CURRENT THERAPY OBJECTIVES: (please circle)
a. acquisition of head control, with trunk supported
b. functional upper extremity use--reach
c. functional upper extremity use--grasp
d. acquisition of trunk control
e. improvement of oral feeding skills--functional swallow
f. improvement of oral feeding skills--drinking by cup
g. improvement of oral feeding skills--chewing
h. functional non-verbal communication
i. verbal communication skill development
j. improvement in pulmonary status
k. maintenance of PROM
l. scoliosis management
m. weight-bearing in standing
n. standing transfers
o. walker training--pre-gait training

MULHOLLAND GROWTH GUIDANCE SYSTEM™

TODDLER SIZE Prespecified System

SPECIFICATIONS: choose one

#1010001 seat depth 7-11 inches, back height 10.5-16 inches	list price \$4207
#1010002 seat depth 8-12 inches, back height 13-18 inches	list price \$4207
#1010003 seat depth 9-14 inches, back height 15-20 inches	list price \$4270

INCLUDES: tilt in space base, neckrest, shoulder pads, thoracic pads,
lateral thigh pads, abductor and footrest assembly
(tray not included, however a tray should be provided for forearm support)

STANDARD OPTIONS

TILT IN SPACE BASE WHEEL SIZE (choose one): 12.5 inch rear wheels 16 inch rear wheels

FOOTREST ASSEMBLY (choose one): independent shoeholders OR full footplate
MOUNTING (choose one): center mount OR full width
(with flip down abductor)

COLORS: (circle one) RED ROYAL BLUE NAVY BLUE TEAL
BURGUNDY GREY PINK BLACK PURPLE
RED/GREY OR TEAL/NAVY COMBINATION OTHER _____

ADDITIONAL OPTIONS AVAILABLE: (please circle)

No flat inserts	#40705002	\$116 pr
Clear, angle adjustable tray	#1013222	\$399
Grey, ABS, angle adjustable tray	#1013221	\$342
Grey, ABS, fixed angle tray	#1013231	\$284
Tray elbow pads (to bring the child's arms forward)	#1003321	\$126 pr
Lumbar Pad (specify height and with) _____	#1003612	\$100
Pelvic Positioner Assembly™	#1016005	\$315
Flip back halo assembly	#1001541	\$342
Second 11 inch neckrest (for additional head control)	#1011361	\$118
Sun Canopy	#1011600	\$137
Utility bag	#1014100	\$53
Feeding pump mounting assembly	#1011650	\$294
1.0 inch seat belt (plastic snap buckle)	#1014000	\$42
1.5 inch seat belt (auto-type buckle)	#1024000	\$63
Safety Harness for children weighing up to 50 lb (required for car seat use and van/bus transport)	#1014011	\$210
Tie - Down Straps (for van/bus transportation)	#1004020	\$210
Van tie-down track-"E" type (2 five foot lengths)	#1004025	\$105
1" Seat Pad	#1000811	\$116
1" Back Pad	#1003520	\$116

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1-1-98

MULHOLLAND GROWTH GUIDANCE SYSTEM™

YOUTH SIZE Prespecified System

SPECIFICATIONS: choose one

#1020001 seat depth 9-14 inches, back height 14-19 inches	list price \$4333
#1020002 seat depth 10-16 inches, back height 15-20 inches	list price \$4333
#1020003 seat depth 12-18 inches, back height 18-23 inches	list price \$4375

INCLUDES: tilt in space base, neckrest, shoulder pads, thoracic pads,
lateral thigh pads, abductor and footrest assembly
(tray not included, however a tray should be provided for forearm support)

STANDARD OPTIONS

TILT IN SPACE BASE WHEEL SIZE (choose one): 12.5 inch rear wheels 16 inch rear wheels

NECKREST (choose one): 5 inch width 13 inch width

FOOTREST ASSEMBLY (choose one): independent shoeholders OR full footplate

MOUNTING (choose one): center mount OR full width
(with flip down abductor)

COLORS (circle one):

RED ROYAL BLUE NAVY BLUE TEAL BURGUNDY PINK
GREY PURPLE BLACK RED/GREY OR TEAL/NAVY COMBINATION

ADDITIONAL OPTIONS AVAILABLE: (please circle assembly)

No flat Inserts	#40705001	\$116 pr
Clear, angle adjustable tray	#1023222	\$399
Grey, ABS, angle adjustable tray	#1023221	\$368
Grey, ABS, fixed angle tray	#1023231	\$284
Tray elbow pads (to bring the child's arms forward)	#1003321	\$126 pr
Lumbar pad (specify height and width) _____	#1003612	\$100
Pelvic Positioner Assembly™	#1026005	\$315
Flip back halo assembly	#1001541	\$342
Second 13 inch neckrest (for additional head control)	#1021362	\$118
Sun Canopy	#1021600	\$137
Utility bag	#1024100	\$53
Feeding pump mounting assembly	#1021650	\$294
1.5 inch seat belt (auto-type buckle)	#1024000	\$63
Shoe holders	#1000620	\$105 pr
Safety Harness for children weighing up to 50 lb (required for car seat use and van/bus transport)	#1024011	\$210
Tie-Down Straps (for van/bus transportation)	#1004020	\$210
Van tie-down track-"E" type (2 five foot lengths)	#1004025	\$105
1" Seat Pad	#1000811	\$116
1" Back Pad	#1003520	\$116

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(800)543-4769
(805)933-1082 FAX

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Positioning Systems Inc.

1-1-98

MULHOLLAND GROWTH GUIDANCE SYSTEM™

JUNIOR SIZE Prespecified System

SPECIFICATIONS: choose one

#1030001 seat depth 12-17, back height 18-23 inches list price \$4375

#1030002 seat depth 13-18, back height 19-24 inches list price \$4375

#1030003 seat depth 15-19, back height 21-24 inches list price \$4375

INCLUDES: tilt in space base, neckrest, shoulder pads, thoracic pads,
lateral thigh pads, abductor and full footrest assembly
(tray not included, however should be provided for forearm support)

STANDARD OPTIONS

TILT IN SPACE BASE WHEEL SIZE: 16 inch rear wheels, 190mm front casters

NECKREST: 14.75 inches

COLORS (circle one):

RED ROYAL BLUE NAVY BLUE TEAL PINK
PURPLE BURGUNDY GREY BROWN BLACK

ADDITIONAL OPTIONS AVAILABLE: (please circle assembly)

No flat inserts	#40705002	\$116 pr
Clear, angle adjustable tray	#1033222	\$399
Grey, ABS, angle adjustable tray	#1033221	\$368
Grey, ABS, fixed angle tray	#1033231	\$284
Tray elbow pads (to bring the child's arms forward)	#1033321	\$126 pr
Derotational flap (attached to thoracic pad) specify right or left	#1002431	\$84
Pelvic Positioner Assembly™	#1036005	\$315
Lumbar pad (specify height and width) _____	#1003612	\$100
Flip back halo assembly	#1001542	\$342
Second 14.75 inch neckrest (for additional head control)	#1031363	\$118
Half neckrest pad (for additional lateral head control)	#1031342	\$71 ea side
Sun Canopy	#1031600	\$137
Utility bag	#1034100	\$53
Feeding pump mounting assembly	#1031650	\$294
2.0 inch seat belt (auto-type buckle)	#1034000	\$63
1.5 inch seat belt (auto-type buckle)	#1024000	\$63
Shoe holders (to be placed on footrest)	#1000630	\$122 pr
1" Seat Pad	#1000811	\$116
1" Back Pad	#1003520	\$116

PO Box 391, Santa Paula, CA 93022
(805)525-7165
(800)543-4769
(805)933-1082 FAX

Mulholland
Positioning Systems Inc.

1-1-98

MULHOLLAND GROWTH GUIDANCE SYSTEM™

SPECIALTY OPTIONS:

Base Options: (these bases are not crash tested for van/bus tie down system)

Rigid, non-folding base, step release tilt	subtract \$210
Rigid, non-folding base, without step release tilt	subtract \$630
Folding, non-step release tilt	subtract \$420

Neckrest Assembly Options:

Double Post Mounting System (for children with large or active heads)	no charge for substitution
Occipital Pad (for children w/ macrocephally)	\$158
Neckrest Size Substitutions--ht (1.75", 2", 2.5") width (4" and 5" single bar mounted only, 11", 13" and 14.5" for single and dbl mtg)	no charge for substitution

Shoulder Pad Options:

Length Substitution--3.5", 4", 4.5"	no charge for substitution
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Halo Options:

Flexible, removable halo	\$231
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Thoracic Pad Options:

Straight Pad (either one or both)	no charge for substitution
Pad Height Substitution--2.5", 3", 3.5", 4", 4.5"	no charge for substitution
Custom Pad Height	add \$91

Kyphosis Sling

add \$63

Custom Seat/Back Pad Foams

ask for quote

Knee Blocks: (used instead of abductor)

#1001811 shallow knee blocks	\$332
#1001882 deep knee blocks	\$332

Tray Options:

#1003311 Padded Forearm Cuff, right	\$69
#1003312 Padded Forearm Cuff, left	\$69
#1003331 Vertical Handholds	\$69 pair

Base Utility Tray (under chair)

ask for quote

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(805)933-1082 FAX
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Mulholland

Positioning Systems Inc.

SAMMONS PRESTON Tumble Form

4 Sammons Court
Bolingbrook, IL 604404989

<http://www.sammonspreston.com>

Phone: Customer service (800) 323-5547
Ordering (800) 323-5547

Fax: (800) 547-3333
(800) 547-3333

E-mail: www.sammonspreston.com

Product family at a glance for clinicians:

Popular name for device	Model/Order #		Useful for which diagnoses?
Carrie Seat-tether straps included	4641-S 4641-L	4641-M 4641-SA	cerebral palsy, muscular dystrophy, spina bifida

Infection control protocols or warranties available? Yes 1 year warranty If yes, description attached?

History of Medicaid/insurance/state disability purchases for individuals? Yes If yes, roll call of states attached? Yes. All 50 states

Product specifications at a glance for clinicians:

Device name	Height/Length ranges	Weight ranges	Recline ranges/options	RF range	FF range	Accessories for positioning
Carrie 4641-S Pre School	30-38"	20-40 lbs.		no	YES	YES
Carrie 4641-L Elementary	38-48"	30-60 lbs.		no	YES	YES
Carrie 4641-M Junior	48-58"	50-100 lbs.		no	YES	YES
Carrie 4641-SA Small Adult	58-68"	60-130 lbs.		no	YES	YES

Product installation specifications at a glance for clinicians:

Appropriate vehicle environments: (check any that apply)

☒ Cars, vans, pickups ☐ School buses ☐ Ambulances ☒ Other (specify):

Product name	Tether needs/ Cam wrap needs	Tether/cam kits standard?	Installation assessment alerts
Carrie Seat	tether	included	printed instruction manual available for size of Carrie seat ordered

Price range categories:

Purchasing programs for professionals or community programs: Yes, as needed

Product name	Under \$50	\$51 – \$200	\$201 – \$500	\$501 – over
Carrie Seat alone				X
Carrie seat with accessories				X
Accessories only			X	

Other manufacturer comments regarding issues for medical/disability clinicians and safety specialists?

**The solution for day-to-day
positioning problems...**

THE Carrie® Seat

THE CARRIE SEAT

From **TUMBLE FORMS®**

The Tumble Forms Carrie Seat solves the positioning problems in day-to-day living. It comes with an adjustable footrest, headrest, and tray. It can be used at home, in school, or to transport your client in the car (complies with F.M.V.S.S. 213).

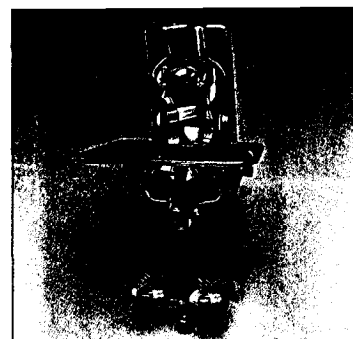
- * Anti-thrust seat stabilizes the pelvis.
- * Seat back articulates 20° to accommodate abnormal trunk tone.
- * Footrest adjusts to maintain hip, knee, and ankle flexion.
- * Headrest height adjusts.
- * Extended lateral head supports keep head in mid-line and neutral.
- * Molded seat shape follows body's contours, providing lateral trunk support and shoulder protraction.
- * Tray adjusts in and out, and tilts. Once in place, tray also assists upper trunk control.
- * Vertical guides adjust the height of the shoulder straps.
- * Tether-strapping device secures seat in a chair or car seat.
- * Complies with FAA requirements for use on airplanes.

See chart to select appropriate size and accessories.

PC 4641S Pre-School	PC 9114 Pre-School without tray & shoes
PC 4641M Elementary	PC 9115 Elementary without tray & shoes
PC 4641L Junior	PC 9116 Junior without tray & shoes
PC 4641SA Small Adult	PC 9117 Small Adult without tray & shoes

CARRIE SEAT DIMENSIONS

	Pre-School	Elementary	Junior	Small Adult
STANDING HEIGHT	30-38 in. (76-97 cm)	38-48 in. (97-122 cm)	48-58 in. (122-147 cm)	58-68 in. (147-173 cm)
WEIGHT	20-40 lbs. (9-18 kg)	30-60 lbs. (14-27 kg)	50-100 lbs. (23-46 kg)	60-130 lbs. (27-59 kg)
SITTING HIP WIDTH	6-8 in. (15-20 cm)	8-10 in. (20-25 cm)	10-13 in. (25-33 cm)	12-16 in. (31-41cm)
THIGH DEPTH	8-11 in. (20-28cm)	10-13 in. (25-33 cm)	12-15 in. (31-38 cm)	14-18 in. (36-46 cm)



PC 4641 — with foot shoes & tray



So convenient for travel — PC 4641SA

**SAMMONS
PRESTON**™
4 Sammons Ct
Bolingbrook, IL
60440
1-800-323-5547

Get Carried Away



Get carried away with the Carrie® Seat from Tumble Forms®

Carrie Seat solves many day-to-day positioning problems. The chair allows a child to sit comfortably while being securely and safely supported.

The molded seat shape follows a body's contours, providing lateral trunk support and shoulder protraction. The anti-thrust seat stabilizes the pelvis. And the seat back articulates 20° to accommodate abnormal trunk tone.

In compliance with crash test standard F.M.V.S.S. 213, the Carrie Seat safely transports your client.

You have the option to purchase the Carrie Seat simply as an affordable car seat, without tray and shoes. Or you can decide to also buy the shoes or the tray — or both.

You choose the features and size—Pre-School, Elementary, Junior, or **Small Adult**—and the Carrie Seat will provide therapeutic comfort and stability.

Let your client choose a destination, then get carried away with Carrie Seat.

For more inform
In Canada

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60440

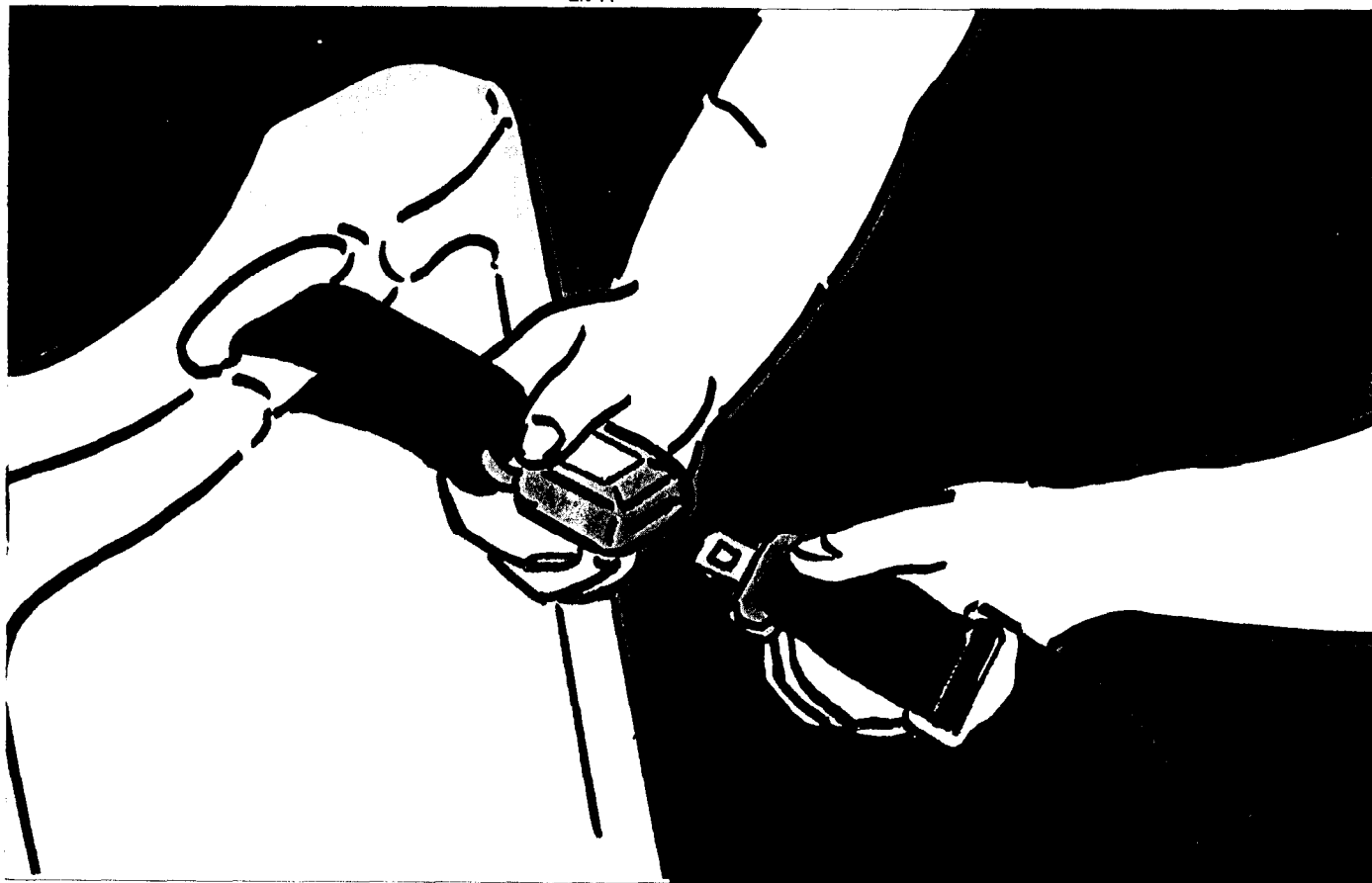
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Tumble Forms
A BISSELL HEALTHCARE COMPANY

**Tumble
Forms®**

Carrie® Seat Instruction Manual

Tumble Forms, Inc.
Lit 17



Please keep in mind

"Correctly used safety seats are highly effective, reducing fatality risk by an estimated 71% and serious injury risk by 67%."*

"Misuse of seats can partially or completely nullify their benefit. 'Partial Misuse' such as misrouting the lap belt, failing to use a tether, or placing an infant facing forward reduces effectiveness of the safety system by 44%. 'Gross Misuse' including failure to secure the child in the seat or the seat in the car can render the seat totally ineffective."*

The placement of the Carrie Seat is also important. "The injury risk for safety seat users is 20% lower in the rear (seat) than in the front. A child in a correctly used restraint in the rear seat is 73% less likely to be hospitalized than an unrestrained child in the front."*

* Reprinted from "Safe Ride News", American Academy of Pediatrics, Vol. IV, No. 3, Spring 1986.

Their life is in your hands

If you have any questions or comments, please contact:

**SAMMONSTM
PRESTON**

4 Sammons Ct
Bolingbrook, IL
60440

1-800-323-5547

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Revision Date: 2/93

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Carrie® Seat

The Carrie Seat may be used only on forward facing seats in vehicles equipped with a properly installed tether strap and either a standard lap belt or a lap/shoulder belt with a locking clip.

Always remember to securely belt the Carrie Seat in the car even when not occupied, since in a crash an unsecured child restraint system may injure other occupants.

Use the Carrie Seat only on vehicle seats with seat backs that lock into place.

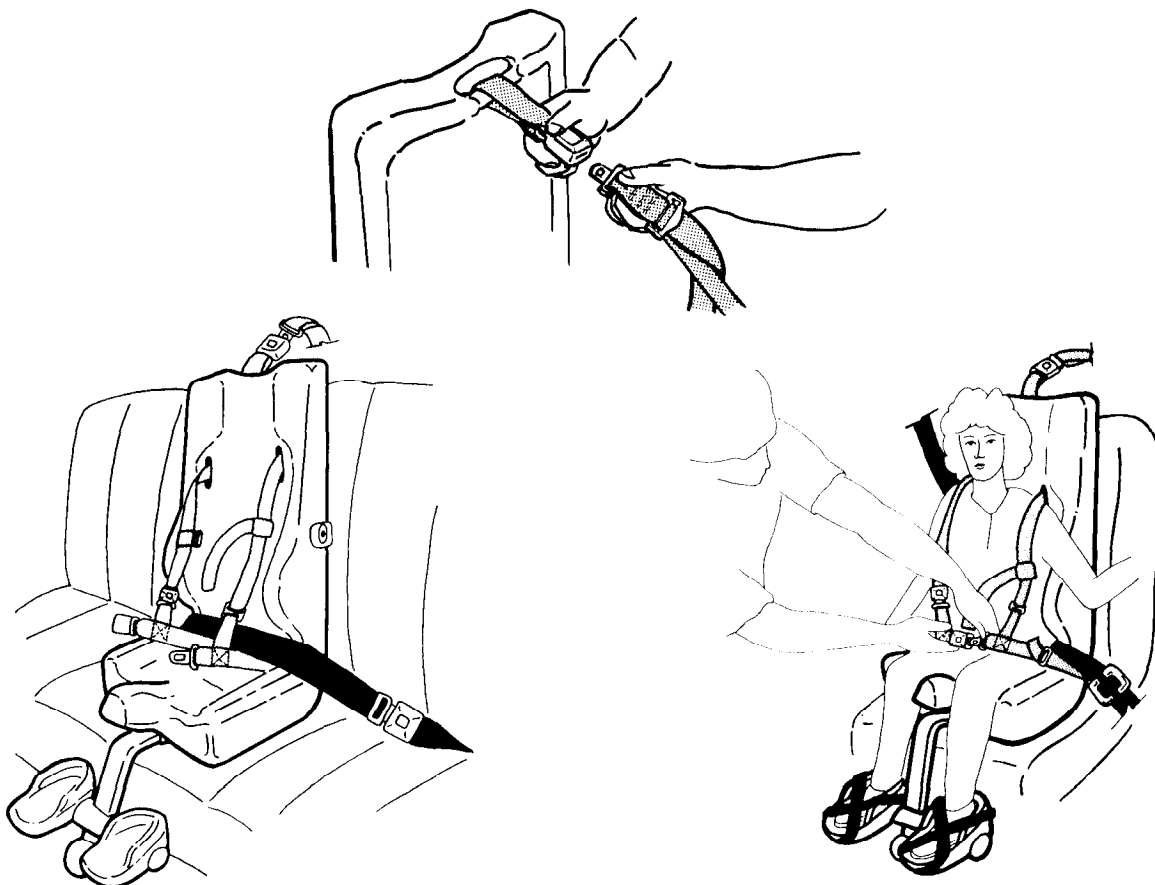
The tray is not part of the Carrie Seat as tested and approved in accordance with F.M.V.S.S. #213. Therefore you cannot use or attach it while the Carrie Seat is being used as a child restraint system.

This child restraint system conforms to all applicable Federal motor vehicle safety standards.

The Carrie Seat should not be used after it has been involved in an accident.

Always keep these instructions with the Carrie Seat.

Daily use of the Carrie Seat simply requires buckling it into the automobile seat, buckling the tether strap, and buckling your child into the Carrie Seat harness.



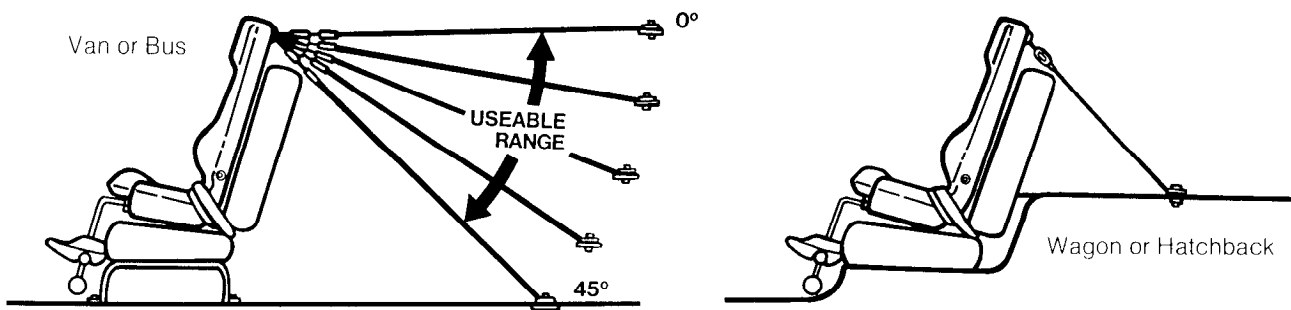
The first step in using the Carrie Seat is installing the tether anchor. Steps 2-4 explain daily use of the Carrie Seat as a car seat. Steps 5-11 describe product features and adjustments used for therapeutic positioning.

1

Tether Anchor Installation

The tether anchor is an essential part of the Carrie Seat design and is absolutely necessary to assure crashworthiness. The tether anchor must be mounted through a metal, structurally sound, integral part of the vehicle body directly behind the seating position in which the Carrie Seat is to be used. This may be a floor such as in a van or bus, or a fixed metal floor panel of the cargo area found in a wagon or hatchback. In a sedan, the anchor may be secured through the metal underbody of the rear package shelf. The most appropriate location for the tether anchor will vary depending on the make and type of vehicle. If you have any trouble determining the most secure location for the tether anchor, please consult your auto dealer or a competent auto mechanic. The following illustrations represent some possible mounting configurations.

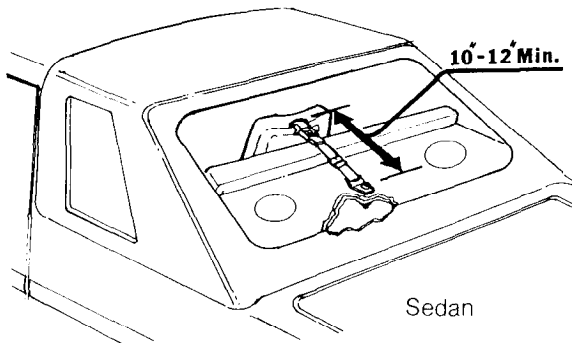
2



When choosing the location for the tether anchor, the angle between the tether strap (when tight) and the floor should not be more than 45 degrees.

Care must be taken not to mount the tether anchor in moldings or storage doors. If mounted through the floor, take care not to hit the gas tank, gas lines, or brake lines.

Carrie® Seat



Do not mount to anchor within 1 1/4" of any large holes such as speaker or defogger holes.

The tether anchor bolt should be located at least 10" - 12" to rear of seat to allow sufficient distance to tighten tether strap.

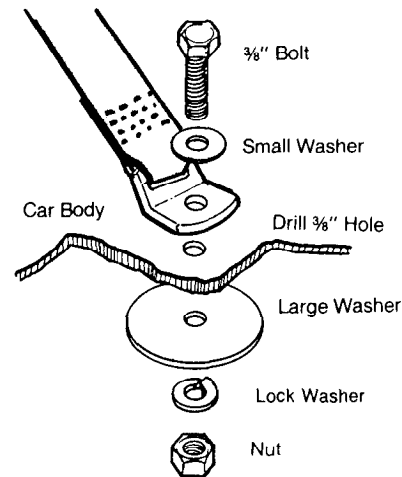
To Install:

Drill a 3/8" diameter hole through the body panel at the selected location.

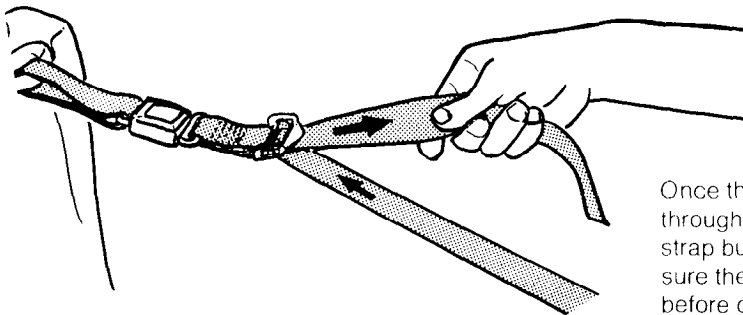
Assemble the tether anchor through the car body as illustrated, making sure the large washer is underneath the mounting surface.

Note: The hole must be properly sealed to prevent exhaust fumes from leaking into your vehicle.

Make sure to tighten the anchor bolt securely.



3



Once the anchor is installed, pull excess webbing through the tether length adjuster (with the tether strap buckled together) until it is tight. Always make sure the tether strap is buckled and adjusted snugly before driving.

2

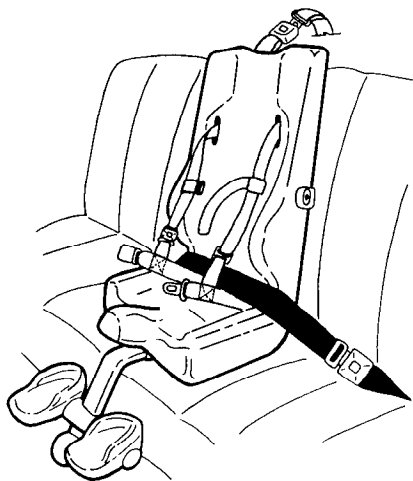
Seat Installation

Place the **Carrie Seat** on automobile seat, making sure it sits snugly against the automobile seat back. Tumble Forms Inc. strongly recommends that you use the **Carrie Seat** in a rear seating position since it is the safest position in an accident.

If you are using a single lap belt:

Pull automobile seat belt around **Carrie Seat** by feeding it **behind** safety positioning harness as shown. Buckle automobile seat belt in place and make sure it is tight.

4

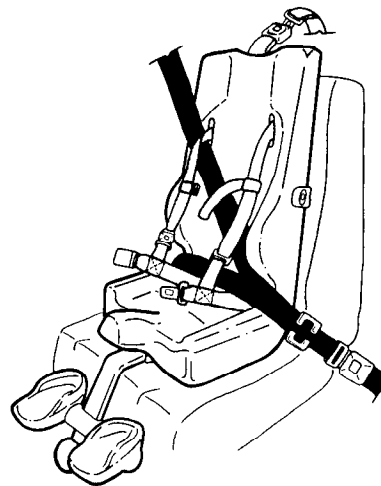


Single lap belt

Some automobiles have a continuous lap/shoulder belt with a "sliding tongue" that lets the belt move freely when buckled. If you use a lap/shoulder belt with a sliding tongue to secure the **Carrie Seat**, you must use a locking clip (provided with seat). The locking clip will prevent the belt from slipping, thus insuring the **Carrie Seat** stays snugly in place.

If you are using a lap/shoulder belt:

Pull lap/shoulder belt around **Carrie Seat** as shown, making sure it passes **behind** positioning safety harness. Buckle lap/shoulder belt in place and make sure it is tight.



Lap/shoulder belt

To attach the locking clip:
Secure the lap/shoulder belt around the **Carrie Seat** as described, then slide the locking clip around both belts, a few inches from the tongue part of the buckle.

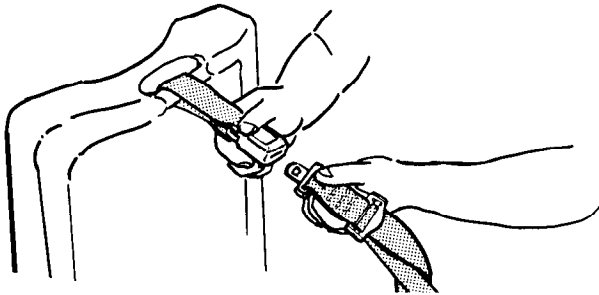


Sliding Tongue

3

Tether

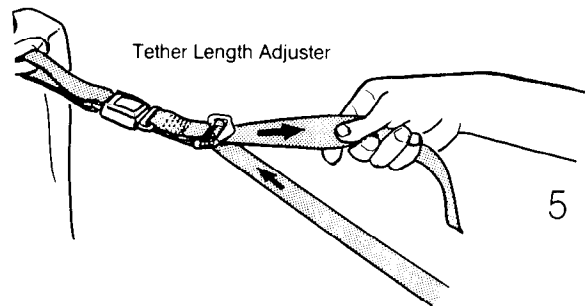
Buckle the tether strap to the Carrie Seat as shown. Before driving, always make sure you buckle the tether strap. The purpose of the tether strap is to prevent the Carrie Seat from coming forward during an impact. Failure to use the tether strap properly may result in your child striking the vehicle interior during a sudden stop or crash.



The Carrie Seat cannot be used as a child restraint without a tether strap.

Pull the end of the tether through the tether length adjuster to make sure there is no slack in it.

Refer to the tether installation instructions for tether anchor location and installation.



4

Harness

Position the child in the Carrie Seat making sure his hips and buttocks are back snugly in the seat.



Fasten the hip strap buckle of the positioning safety harness around the child as shown in the illustration.

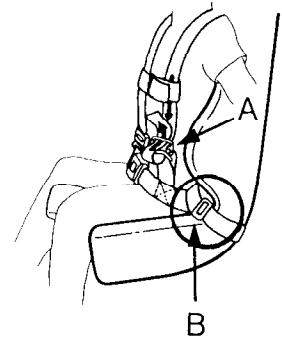
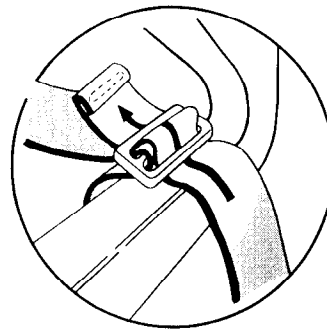
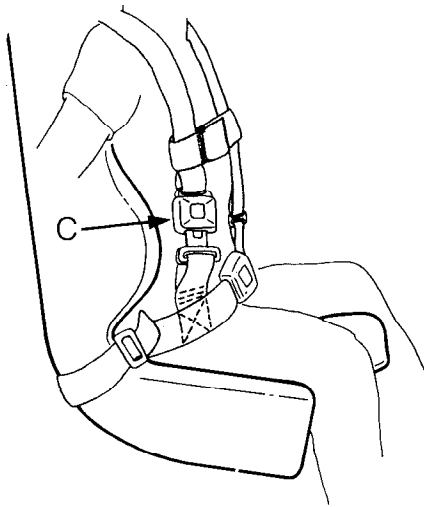


To secure the horizontal chest strap, feed it through the opposing metal slide then fasten it back into itself (pressing the velcro together). Make sure the chest strap is located on the chest but comfortably below your child's neckline.

Harness Adjustment

First release buckle (C) to allow shoulder straps to slacken. Next, buckle the hip straps together and tighten each side snugly by threading it through its adjustment slide (B). Tighten each side equally so that the buckle stays centered on the child. Make sure the hip straps are located down across the hips of your child, not up in the soft stomach area.

6



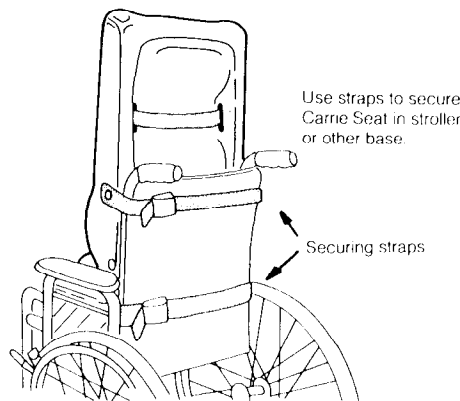
After the hip strap is adjusted snugly, re-connect buckle (C), then tighten the shoulder straps by feeding excess webbing through the adjustment slides (A). Once the entire harness has been adjusted snugly, your child may be easily removed from the seat by unbuckling the shoulder strap buckle (C), the chest strap, and the hip strap buckle. Always make sure that the buckles of the positioning safety harness are snapped together securely before traveling.

Therapeutic Positioning

5

Securing Straps

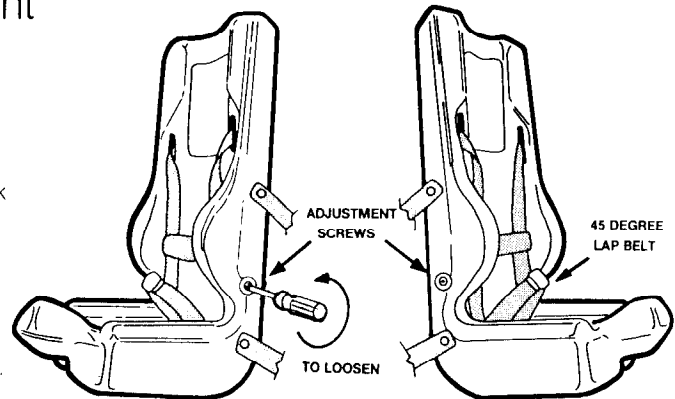
The Carrie Seat has two securing straps that pass around the back of the seat. When the Carrie Seat is placed in a chair or a wheeled base (such as a wheelchair), the securing straps should be used to secure the Carrie Seat to the base. This is particularly important to prevent the Carrie Seat from tipping out of the base if someone leans on the tray or if the wheeled base comes to a sudden stop.



6

Trunk Tone Adjustment

The design of the Carrie Seat is based on the premise that positioning the pelvis securely is the foundation of seating control and posture. The trunk tone adjustment is located at the top of the hips, allowing one to adjust the trunk tone without affecting the stability of the pelvis. This adjustment is accomplished by means of an internal frame which moves the torso up to 10° forward or backward based on a 90° seat to back relationship.



LOCATE THE TWO PHILLIPS-HEAD ADJUSTMENT SCREWS (ONE ON EACH SIDE OF SEAT AS SHOWN IN FIGURE A) AND LOOSEN THEM.

Pull the "seat back" towards the "seat bottom" or push it away from the "seat bottom" to adjust for flexion or extension.

When optimum position is achieved, tighten both adjustment screws securely.

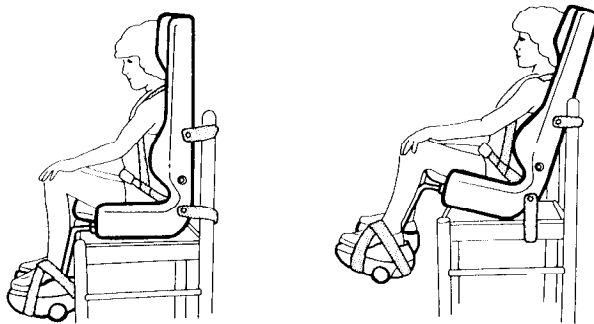
Check periodically to insure that screws are tight and adjustment position is maintained.

Hip flexion/extension can be affected by raising or lowering the footrest (see Adjustable Footrest).

7

7

Carrie Seat Orientation



RECLINE SEAT TO RELAX ABNORMAL MUSCLE TONE
SECURE SEAT WHEN OPTIMUM POSITION IS ACHIEVED

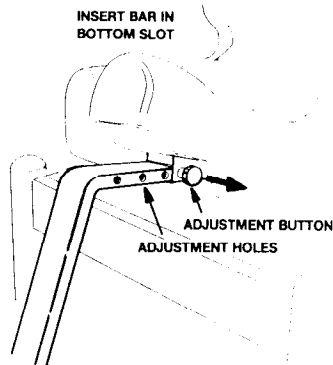
Changing the orientation of the Carrie Seat in space allows gravity to help position the child in midline and relax abnormal muscle tone. The therapist can recline the seat back until the optimum degree of relaxed control is observed. The angle of recline should be decreased as progress is observed.

8

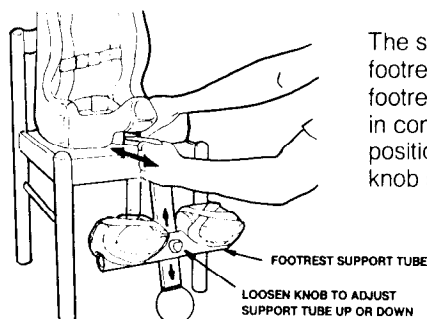
Adjustable Footrest

The adjustable footrest consists of three adjustable components, the footrest bar, the support tube, and the individual footrest shoes.

The footrest should be inserted into the **bottom slot** of the bracket located under the abductor. Insert the footrest bar until the spring loaded adjustment button "clicks" into the first adjustment hole. Pull the adjustment button out to move the footrest to one of the other adjustment positions.



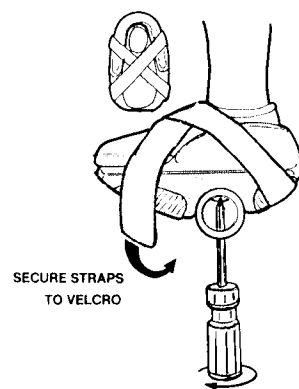
8



The support tube may be adjusted up and down the footrest bar by loosening the knob between the footrest shoes. This adjustment may be used to assist in controlling hip flexion or extension. When optimum position has been achieved, be sure to tighten the knob so the support tube maintains its position.

The footrest shoes can be tilted individually for ankle dorsiflexion or plantiflexion. This is accomplished by inserting a Phillips-head screwdriver in the hole in the footrest tube (directly under each shoe) and loosening the screw. Be sure to tighten the screw after repositioning the footrest.

To secure the child's foot to the footrest, cross the webbing straps over the child's foot and fasten to the velcro under the front of the footrest shoe.



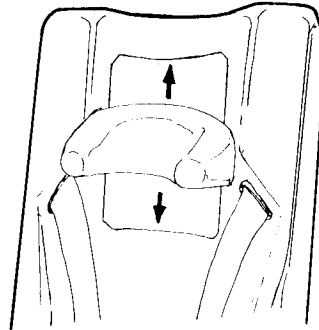
9

Positioning Safety Harness

See car seat instructions for harness adjustment directions on pages 5 and 6.

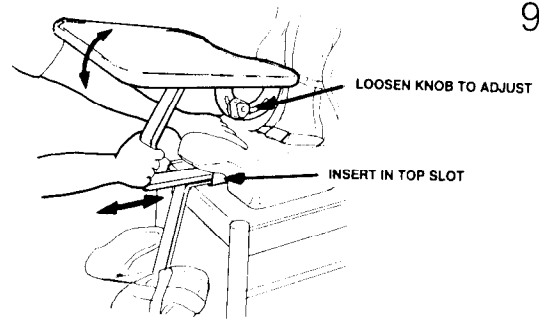
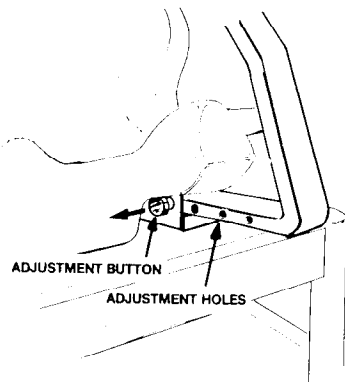
10 Adjustable Head Support

The head support can be adjusted up or down on the velcro pad located at the top of the seat. The purpose of the head support is to hold the head and neck in midline without putting pressure on the occipital region.



11 Adjustable Tray

To use the tray, insert the tray bar into the top slot of the bracket located under the abductor. Insert the bar until the spring loaded adjustment button "clicks" into the first adjustment hole. Pull the adjustment button out to move the tray bar to one of the other adjustment positions.



The tray angle can be changed by loosening the knob on the side of the tray. Be sure to tighten the knob securely after adjusting.

WARNING:
THE TRAY IS NOT PART OF THE CARRIE SEAT AS TESTED AND APPROVED IN ACCORDANCE WITH F.M.V.S.S. #213. THEREFORE YOU CANNOT USE OR ATTACH IT WHILE THE CARRIE SEAT IS BEING USED AS A CHILD RESTRAINT SYSTEM.

MAINTENANCE OF THE CARRIE SEAT

The Tumble Forms covering may be cleaned with household or industrial grade detergents, either liquid or abrasive powder types. Do not soak or immerse the cushion in water; it will take water in through the vent hole, like a sponge, and become water logged.

The Tumble Forms covering can be disinfected with alcohol or 3% hydrogen peroxide.

The harness straps can be handwashed with warm soapy water and disinfected with alcohol or 3% hydrogen peroxide. It can be scrubbed clean with a nylon brush. Do not removed the harness from the Carrie Seat.

Contact the manufacturer if:

The harness becomes worn or damaged.

The outside of the Carrie Seat becomes ripped or torn and a maintenance kit is needed.

Extra tether straps are needed.

RECOMMENDATIONS

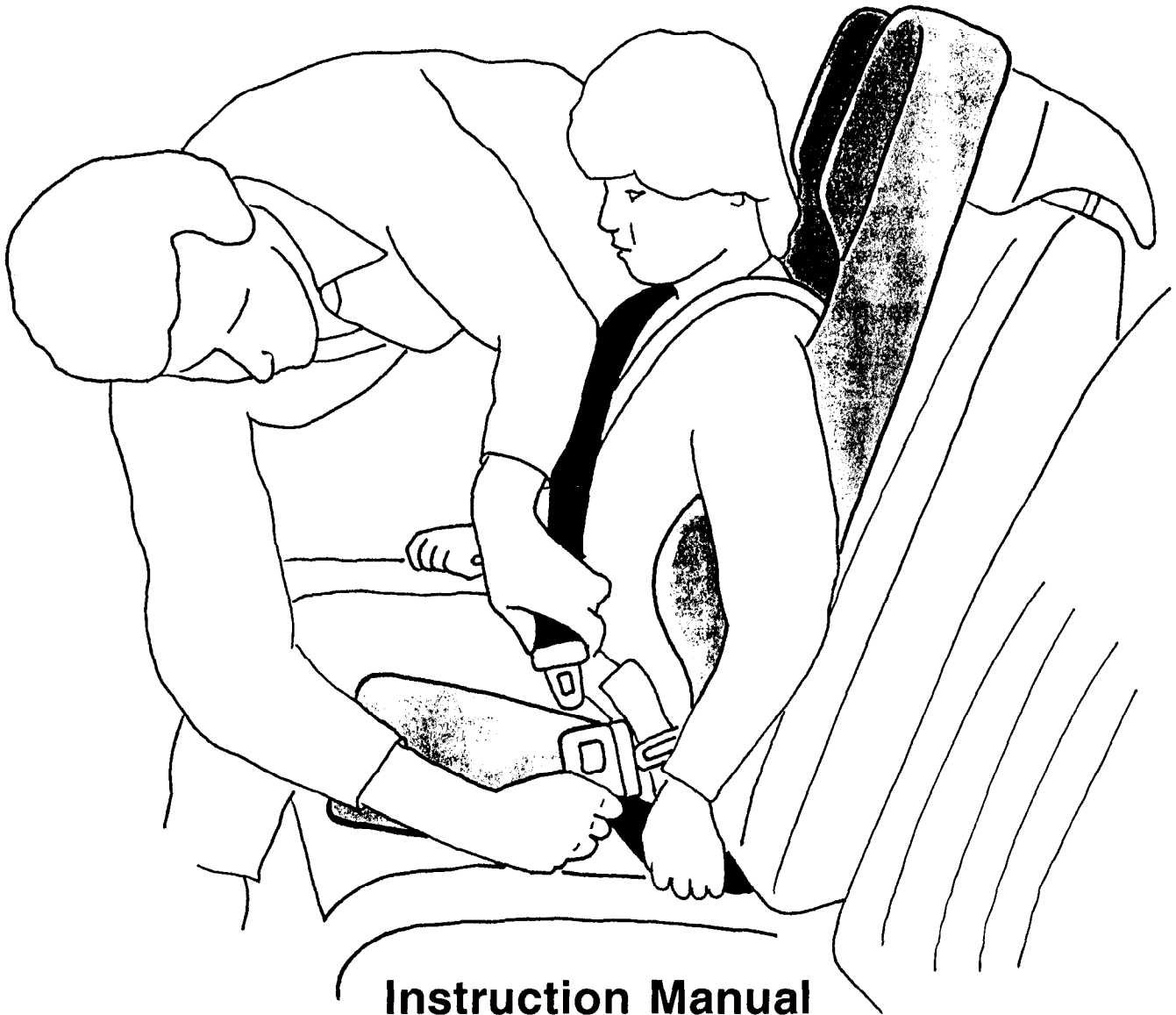
The Carrie Seat will help you to effectively position and safely transport your handicapped child. It is up to you as a parent to use the Carrie Seat according to the instructions.

Follow this safety checklist everytime your child travels in the Carrie Seat.

1. Make sure the Carrie Seat is properly installed and adjusted as per manufacturers instructions.
2. Position your child in the Carrie Seat as described in the instructions making sure all straps (including tether) are buckled and tight. You should check them **every** time you use the seat.
3. Drive safely.

**Tumble
Forms®**

Junior **Carrie®** Seat



Tumble Forms, Inc.
LIT 8

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The Junior Carrie Seat is a positioning seat designed to transport your special needs adolescent weighing 50 to 100 pounds. Federal Motor Vehicle Safety Standard (F.M.V.S.S.) 213 was written to insure safe travel for children 0 to 50 pounds and at the present time there are no guidelines for children over 50 pounds. This is primarily because standard auto safety belts can accommodate larger children and adults. However special needs children, regardless of size, require good positioning as well as a standard of safety. Therefore, the Junior Carrie Seat was designed and tested to the spirit and intent of F.M.V.S.S. 213. The results of the crash tests show that if installed and used according to the instructions, the Junior Carrie Seat is a safe positioning seat for the special needs child.

Installation

Place the Junior Carrie Seat on the automobile seat, making sure that it sits snugly against the automobile seat back. Tumble Forms, Inc. strongly recommends that you use the Junior Carrie Seat in a rear seating position since it is the safest position in an accident.

Using a lap/shoulder belt

2

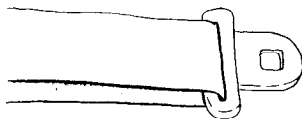
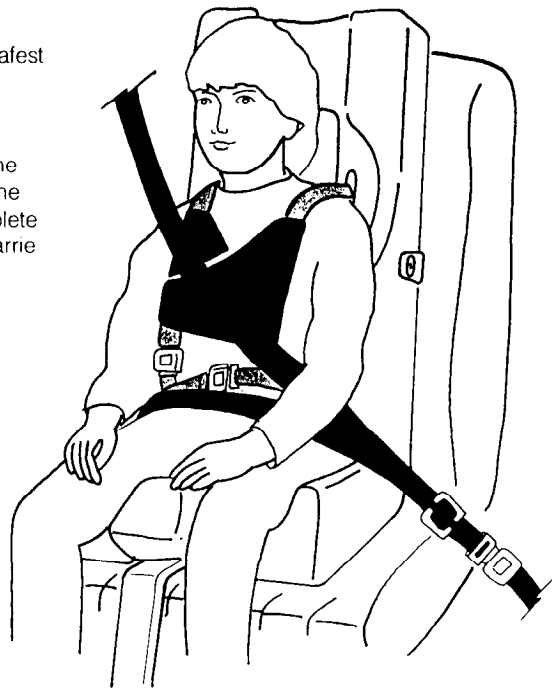
Place the child in the Junior Carrie Seat making sure that the hips and buttocks are back snugly in the seat, and fasten the positioning safety harness (see pages 6 through 8 for complete instructions). Pull the lap/shoulder belt around the Junior Carrie Seat and child as shown, making sure that it is tight.

Some automobiles have a continuous lap/shoulder belt with a "sliding tongue" that lets the belt move freely when buckled. If you use a lap/shoulder belt with a sliding tongue to secure the Junior Carrie Seat, you must use a locking clip (provided with the seat). The locking clip will prevent the belt from slipping, insuring that the Junior Carrie Seat stays snugly in place.

Daily use of the Junior Carrie Seat simply requires buckling your child into the Junior Carrie Seat harness, then buckling the three point lap/shoulder belt over the child and the seat.

Locking Clip

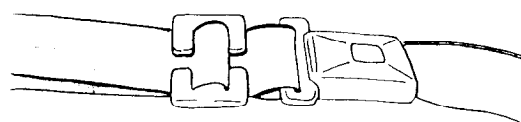
Secure the lap/shoulder belt around the Junior Carrie Seat and child as described, then slide the locking clip around both belts, a few inches from the tongue part of the buckle.



Sliding Tongue



Locking Clip



Junior **Carrie**® Seat

Using A Single Lap Belt with Safety Tether Strap (Second Choice Installation of the Junior Carrie Seat)

If a three point lap/shoulder belt is not available, you may choose to use a standard auto lap belt. The Safety Tether **MUST** be used in this installation method.

The first step in using this method of installing the Junior Carrie Seat is the installation of the Safety Tether anchor (See pages 4 and 5 for complete instructions). Place the Junior Carrie Seat on the automobile seat, making sure that it sits snugly against the automobile seat back. Connect the Safety Tether Strap to the Junior Carrie Seat.

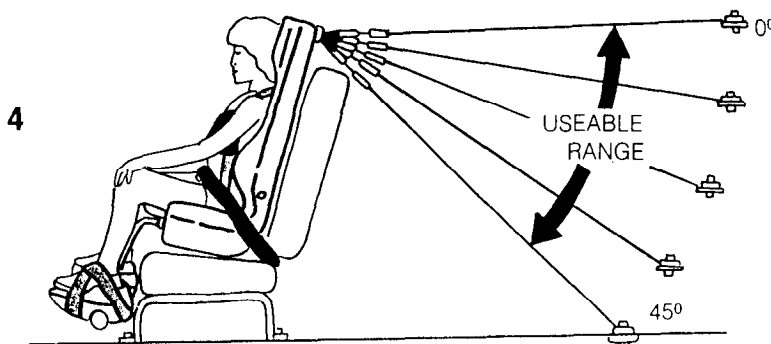


Place the child in the Junior Carrie Seat, making sure that the hips and buttocks are back snugly in the seat, and fasten the positioning harness (see pages 6 through 8 for complete instructions). Pull the auto lap belt around the Junior Carrie Seat and child as shown. Make sure that it passes over the child and is tight.

Tether Anchor

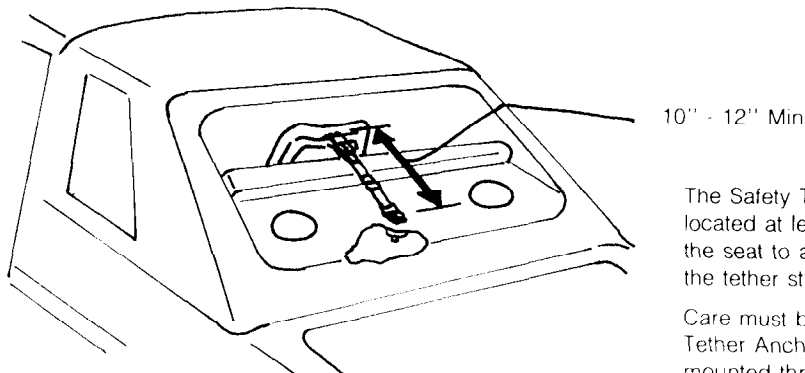
The Safety Tether Anchor is an essential part of the Junior Carrie Seat design and is absolutely necessary to assure crashworthiness when using a standard auto lap belt. It will prevent the Junior Carrie Seat from coming forward during an impact. Failure to use the Safety Tether Strap may result in your child striking the vehicle interior during a sudden stop or crash.

The Safety Tether Anchor must be mounted through a metal, structurally sound, integral part of the vehicle body directly behind the seating position in which the Junior Carrie Seat is to be used. This may be the floor in a van or bus, or a fixed metal floor panel in the cargo area of a station wagon or hatch back. In a sedan, the anchor may be secured through the metal underbody of the rear package shelf. The most appropriate location for the Safety Tether Anchor will vary depending on the make and type of vehicle that you are using. If you have any trouble determining the most secure location for the Safety Tether Anchor, please consult your auto dealer or a competent auto mechanic.



When choosing the location for the Safety Tether Anchor, the angle between the tether strap (when tight) and the floor should not exceed 45 degrees.

Do not mount the Safety Tether Anchor within 1¼" of any large holes, i.e. speaker or defogger holes.



The Safety Tether Anchor bolt should be located at least 10" to 12" from the rear of the seat to allow sufficient distance to tighten the tether strap.

Care must be taken not to mount the Safety Tether Anchor in moldings or storage doors. If mounted through the floor, take care not to hit the gas tank, gas lines or brake lines.

Junior **Carrie®** Seat

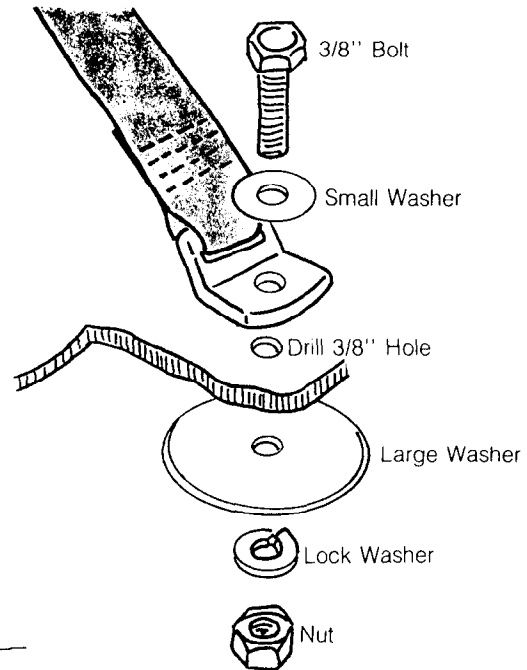
To Install:

Drill a 3/8" diameter hole through the body panel at the selected location.

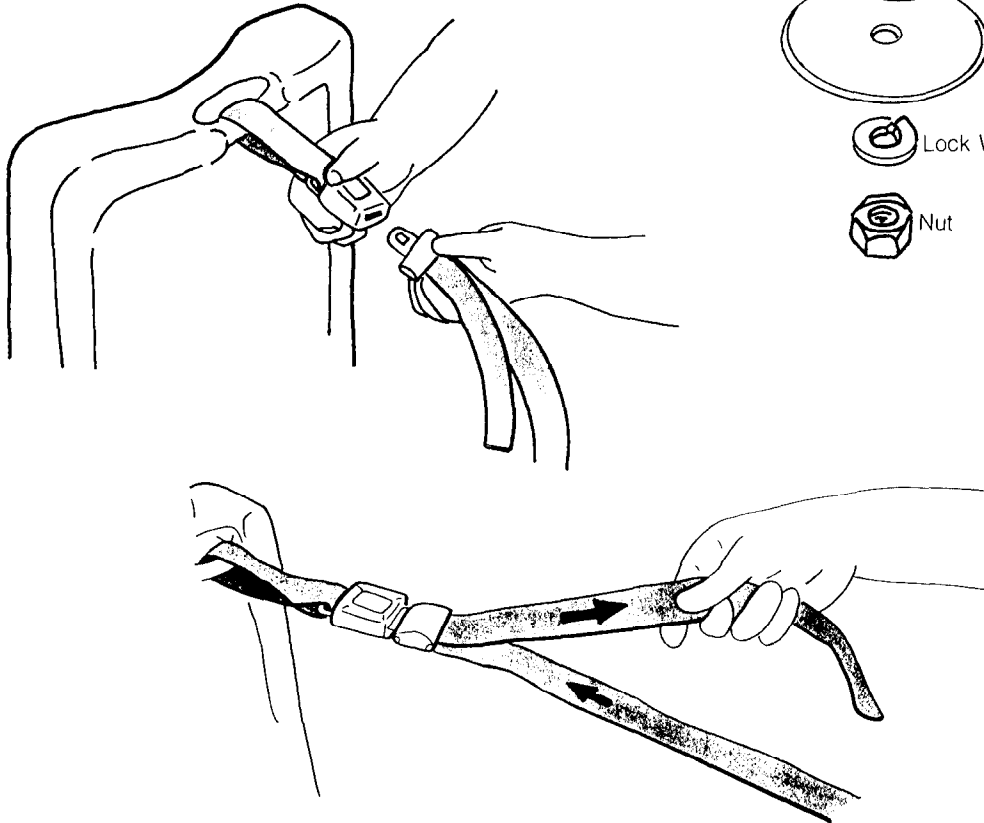
Assemble the Safety Tether Anchor through the car body as illustrated, making sure that the large washer is underneath the mounting surface.

NOTE: The hole must be properly sealed to prevent exhaust fumes from leaking into your vehicle.

Make sure to tighten the Safety Tether Anchor bolt securely.



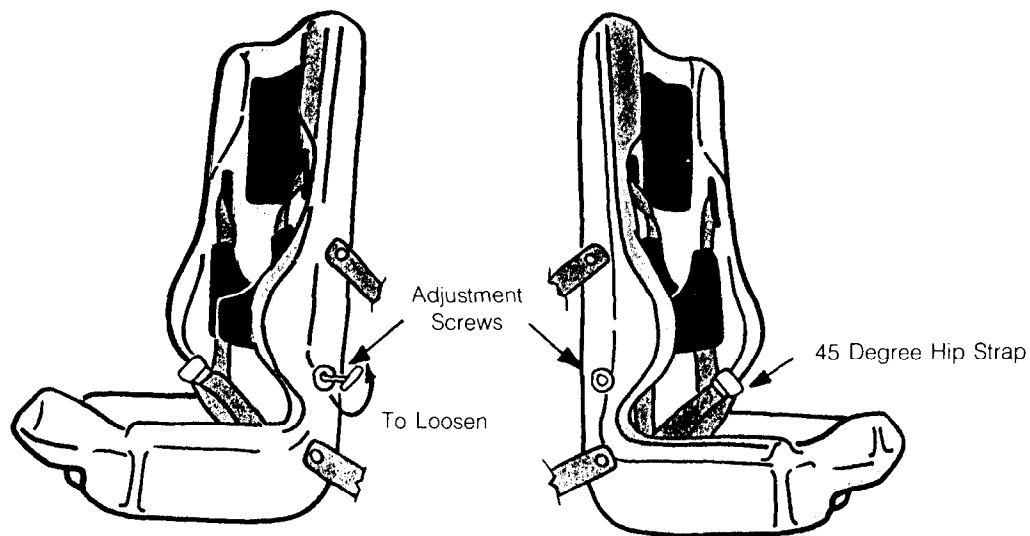
5



Once the Safety Tether Anchor is installed buckle it to the seat as shown and pull the excess webbing through the Safety Tether Length Adjuster until it is tight.

The design of the Junior Carrie Seat is based on the premise that positioning the pelvis securely is the foundation of seating control and posture. The trunk tone adjustment is located at the top of the hips, allowing one to adjust the trunk tone without affecting the stability of the pelvis. This adjustment is accomplished by means of an internal frame which moves the torso up to 10 degrees forward or backward based on a 90 degree seat to back relationship.

6



To Adjust:

Locate the adjustment screws (one on each side) and loosen them.

Pull the "seat back" towards the "seat bottom" or push it away from the "seat bottom" to adjust for flexion or extension.

When optimum position is achieved, tighten both adjustment screws securely.

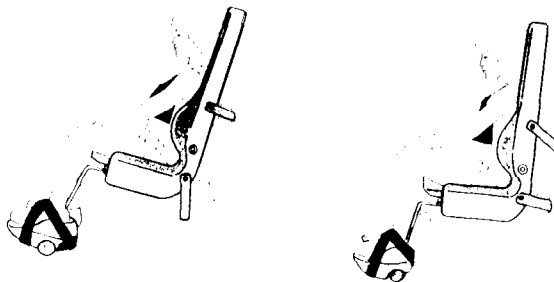
Check periodically to insure that the screws are tight and that the adjustment position is maintained.



Junior Carrie Seat Orientation

Recline the seat to relax abnormal muscle tone.

Secure the seat when optimum position is achieved.



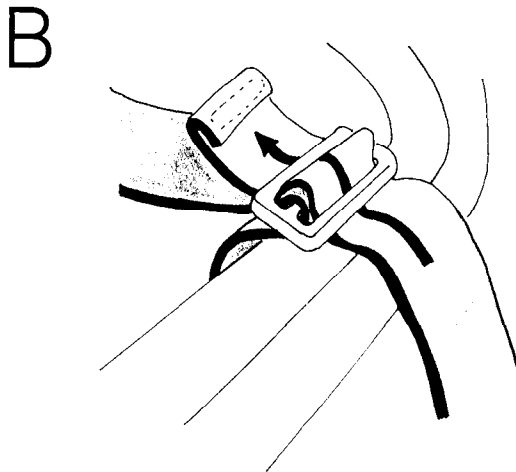
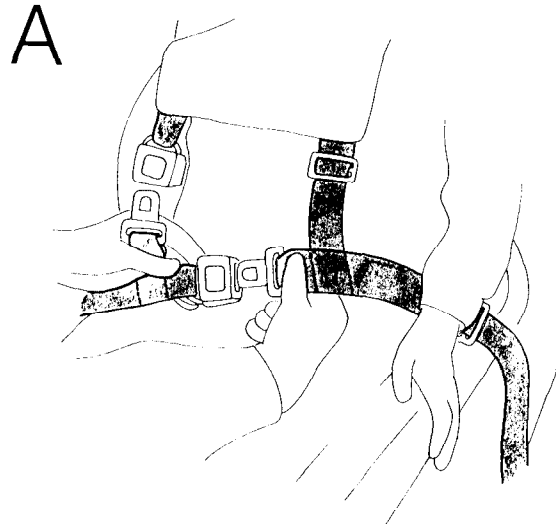
Junior **Carrie®** Seat

Positioning Harness

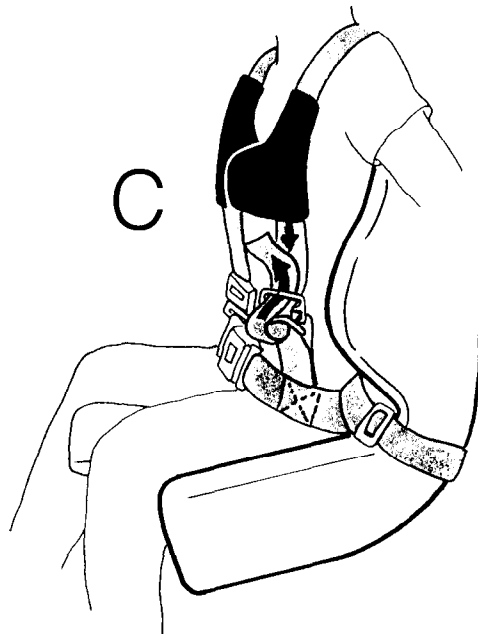
To custom fit the positioning safety harness to the child:

1. First position the child in the Junior Carrie Seat making sure that the hips and buttocks are back snugly in the recessed bottom of the seat.
2. Buckle the hip straps together and tighten each side snugly by threading it through its adjustment slide (refer to drawing "B").

Tighten each side equally so that the buckle stays centered on the child. Make sure that the hip straps are located down, across the hips of the child as shown, not up in the soft stomach area.



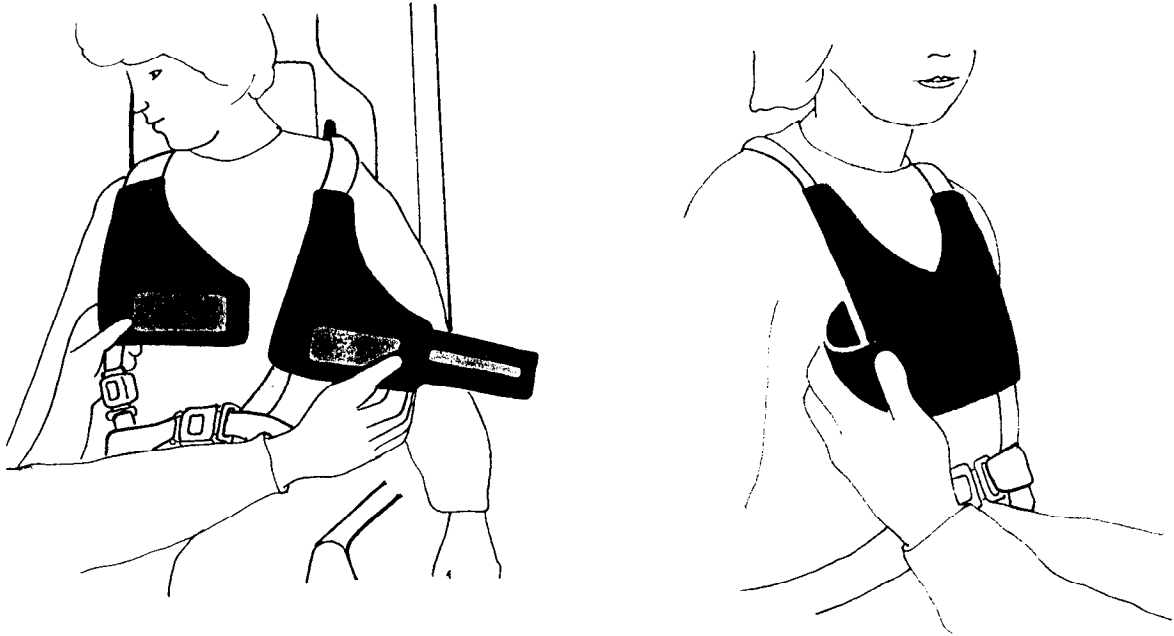
3. After the hip strap is adjusted snugly, tighten the shoulder strap. To adjust the length of the shoulder strap, feed the excess webbing through the adjustment slides as shown in drawing "C". Always make sure that the harness is adjusted snugly and all buckles are snapped together securely before traveling.



7

Horizontal Chest Pad

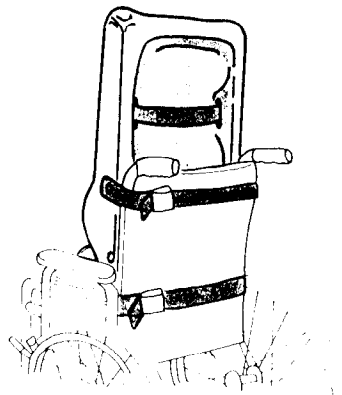
8



Secure the horizontal chest pad by wrapping it around the opposing shoulder strap and pressing the Velcro fasteners together as shown. Make sure that the chest pad is located on the chest but comfortably below your child's neckline. This keeps the shoulder straps from sliding off the child's shoulders.

Securing Straps

The Junior Carrie Seat has two securing straps that pass around the back of the seat. When the Junior Carrie Seat is placed in a chair or a wheeled base (such as a wheelchair), the securing straps should be used to secure the Junior Carrie Seat to the base. This is particularly important in preventing the Junior Carrie Seat from tipping out of the base if someone leans on the tray, or if the wheeled base comes to a sudden stop.



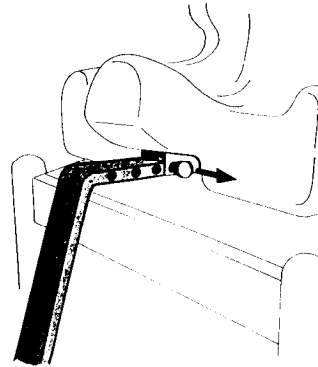
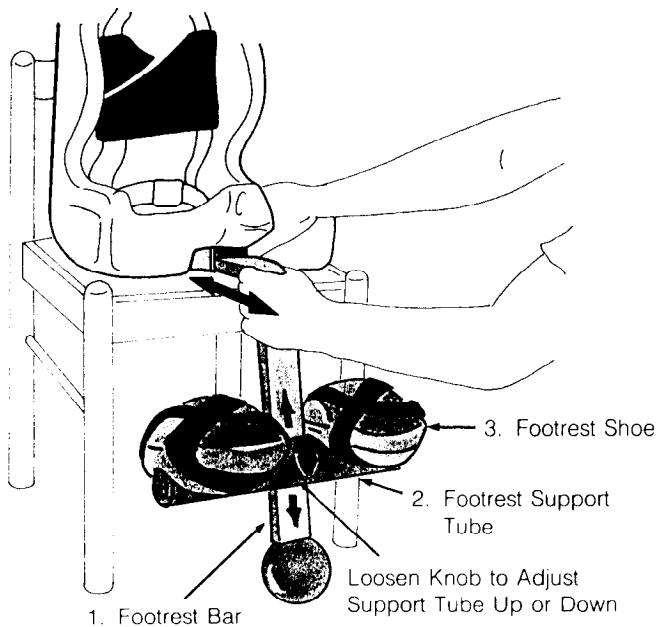
Junior Carrie® Seat

Adjustable Footrest

The Junior Carrie Seat Footrest is essential for proper positioning. The up and down adjustment is used to help control hip flexion and extension.

The adjustable footrest consists of three adjustable components:

1. The footrest bar.
2. The support tube.
3. The individual footrest shoes.



The footrest should be inserted into the slot in the bracket located under the abductor. Insert the footrest bar until the spring loaded adjustment button clicks into place in the first adjustment hole. Pull the adjustment button out to move the footrest to one of the other adjustment positions for shorter thigh lengths.

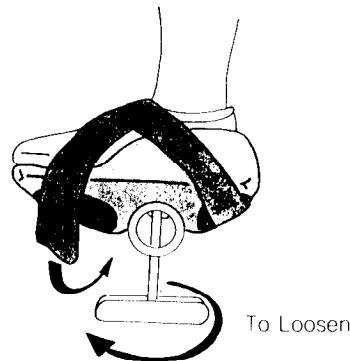
9

The support tube may be adjusted up and down the footrest bar by loosening the knob between the footrest shoes. This adjustment may be used to assist in controlling hip flexion or extension. When optimum position has been achieved, be sure to tighten the knob so that the support tube maintains its position.

The footrest shoes can be tilted individually for ankle dorsiflexion or plantarflexion. This is accomplished by loosening the screw in the hole in the footrest tube directly under each shoe (Use T-handle Allen wrench packed in the literature pouch on the back of the seat).

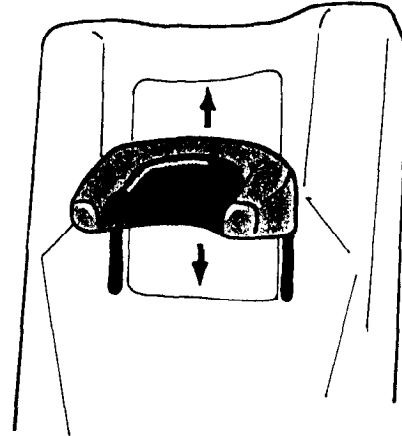
Please be sure to tighten the screw securely after repositioning the footrest and return the wrench to the literature pouch.

To secure the child's foot to the footrest, cross the webbing straps over the child's foot and fasten to the Velcro loop pad under the front of the footrest shoe.



Adjustable Head Support

The head support can be adjusted up or down on the Velcro loop pad located at the top of the seat. The purpose of the head support is to hold the head and neck in midline without putting pressure on the occipital region.

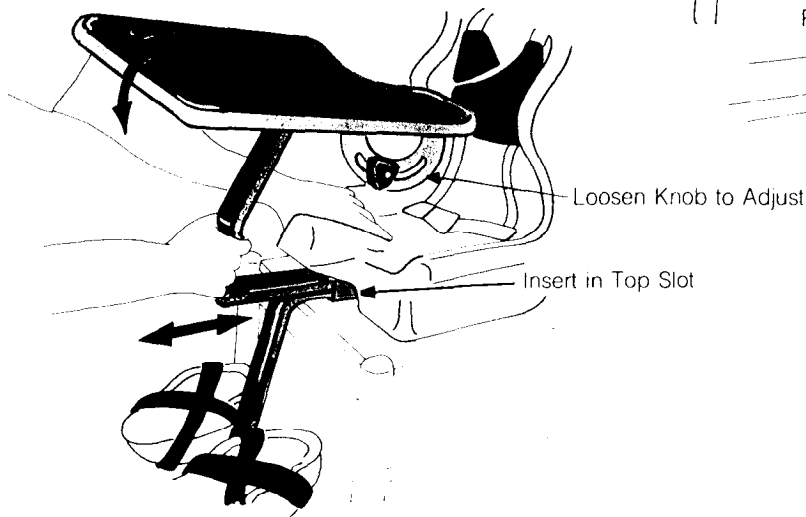
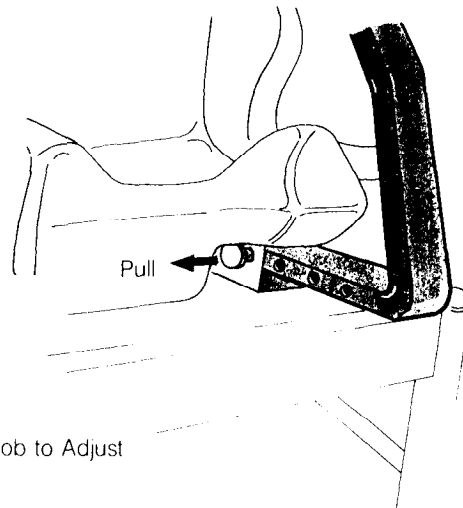


Adjustable Tray

To use the tray, insert the tray bar into the top slot of the bracket located under the abductor. Insert the bar until the spring loaded adjustment button clicks into the first adjustment hole. Pull the adjustment button out to move the tray bar to one of the other adjustment positions as shown to the right.

The tray angle can be changed by loosening the knob on the side of the tray. Be sure to tighten the knob securely after adjusting.

10



WARNING: THE TRAY IS NOT PART OF THE JUNIOR CARRIE SEAT AS CRASH TESTED. DO NOT USE OR ATTACH IT WHILE THE JUNIOR CARRIE SEAT IS BEING USED AS A CHILD RESTRAINT SYSTEM!

Junior **Carrie®** Seat

Buckle Up!

"Correctly used safety seats are highly effective, reducing fatality risk by an estimated 71% and serious injury risk by 67%."*

"Misuse of seats can partially or completely nullify their benefit. 'Partial Misuse' such as misrouting the lap belt, failing to use a tether, or placing an infant facing forward reduces effectiveness of the safety system by 44%. 'Gross Misuse' including failure to secure the child in the seat or the seat in the car can render the seat totally ineffective."*

Rear Seat Preference

The placement of the Junior Carrie Seat is also important. "The injury risk for safety seat users is 20% lower in the rear (seat) than in the front. A child in a correctly used restraint in the rear seat is 73% less likely to be hospitalized than an unrestrained child in the front."*

Rear Seat Shoulder Belts

The Academy has commented to the National Highway Traffic Safety Administration on the advisability of requiring the installation of shoulder belts in the rear seat(s) of passenger vehicles. The AAP "strongly recommends adoption of a three point harness requirement for rear-seating positions" because: 1) the public must have confidence that the available systems are safe and effective; and 2) the rear seat is the special domain of children. "For too long," the comment reads, "the special safety needs of children literally have taken a back seat to the needs of adults." Letter from William C. Montgomery, MD, President**

* Reprinted from "Safe Ride News", American Academy of Pediatrics, Vol. IV, No. 3, Spring 1986

** Reprinted from "Safe Ride News", American Academy of Pediatrics, Vol. VI, No. 3, Summer 1987

Recommendations

Make sure that the Junior Carrie Seat is properly installed and adjusted as per the manufacturers instructions.

Position your child in the Junior Carrie Seat as described in the instructions, making sure that all straps (including tether) are buckled and tight. Check them every time you use the seat!

Always remember to securely belt the Junior Carrie Seat in the car even when not occupied, since in a crash, an unsecured child restraint system may injure other occupants.

Drive safely!

If your Junior Carrie Seat is ever involved in an accident it should not be used again. The integrity of the structure and restraint webbing could be questionable.

If you have Tumble F Phone: 1	SAMMONSTM PRESTON	4 Sammons Ct Bolingbrook, IL 60440	For contact: Jackson, MI. 49201
	1-800-323-5547		

Some of the information in this manual may be incorrect due to product changes which may have occurred after we went to press. Due to our policy of continued product development we reserve the right to alter product specifications.

**Tumble
Forms®**

Small Adult Carrie® Seat



Instruction Manual

**SAMMONS
PRESTON**

4 Sammons Ct
Bolingbrook, IL
60440

1-800-323-5547

General Information

The Carrie Seat may be used only on forward facing seats in vehicles equipped with a properly installed tether strap and either a standard lap belt or a lap/shoulder belt with a locking clip.

Always remember to securely belt the Carrie Seat in the car even when it is not occupied, since in a crash an unsecured restraint system may injure other occupants.

Use the Carrie Seat only on vehicle seats with seat backs that lock into place.

The Small Adult Carrie Seat is designed for use by adolescents and small adults between 60 and 130 pounds and between 58 and 68 inches in height.

The tray is not part of the Carrie Seat as tested and approved in accordance with F.M.V.S.S. #213. Therefore you cannot use or attach it while the Carrie Seat is being used as an automotive restraint system.

Buckle Up!

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The placement of the Small Adult Carrie seat is also important. "The injury risk for safety seat users is 20% lower in the rear (seat) than in the front. A child in a correctly used restraint in the rear seat is 73% less likely to be hospitalized than an unrestrained child in the front."*

*Reprinted from "Safe Ride News", American Academy of Pediatrics, Vol. IV, No. 3, Spring 1986.

**Reprinted from "Safe Ride News", American Academy of Pediatrics, Vol. VI, No. 3, Summer 1987.

The Small Adult Carrie Seat is designed to therapeutically position and transport small adults and adolescents weighing 60 to 130 pounds. Unfortunately F.M.V.S.S. #213 does not address seats that are designed to position children over 50 pounds. This is primarily because a standard safety belt is sufficient to restrain a normal child or small adult of over 50 pounds. However, special needs children, regardless of size, require good positioning as well as a standard of safety. The Small Adult Carrie Seat was designed and tested to the spirit and intent of F.M.V.S.S. #213. If installed and used according to the instructions, the Small Adult Carrie Seat provides safe, therapeutic positioning.

Installation:

Place the Small Adult Carrie Seat on the automobile seat, making sure that it fits snugly against the automobile seat back. Tumble Forms, Inc. recommends that you use the Small Adult Carrie Seat in a rear seating position since it is the safest position in an accident. The Carrie Seat Footrest may need to be removed if there is not enough space in front of the Carrie Seat to accommodate it.

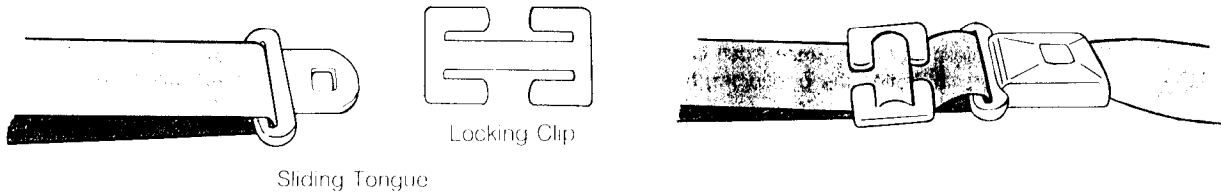
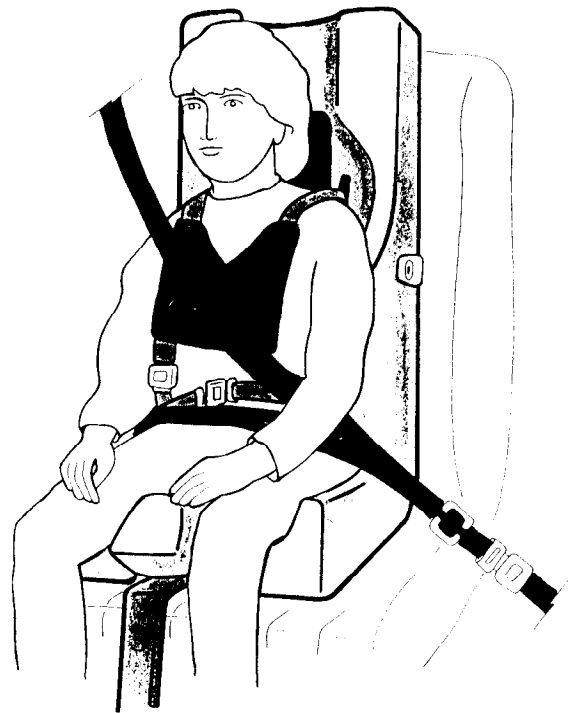
Using a Lap/Shoulder Belt

Place the adolescent in the Small Adult Carrie Seat making sure that the hips and buttocks are back snugly in the seat, and fasten the positioning safety harness (see pages 6 through 8 for complete instructions). Pull the lap/shoulder belt around the Small Adult Carrie Seat and adolescent as shown, making sure that it is tight.

Some automobiles have a continuous lap/shoulder belt with a "sliding tongue" that lets the belt move freely when buckled. If you use a lap/shoulder belt with a sliding tongue to secure the Small Adult Carrie Seat, you must use a locking clip (provided with the seat). The locking clip will prevent the belt from slipping, insuring that the Small Adult Carrie Seat stays snugly in place.

Locking Clip

Secure the lap/shoulder belt around the Small Adult Carrie Seat and adolescent as described, then slide the locking clip around both belts, a few inches from the tongue part of the buckle.



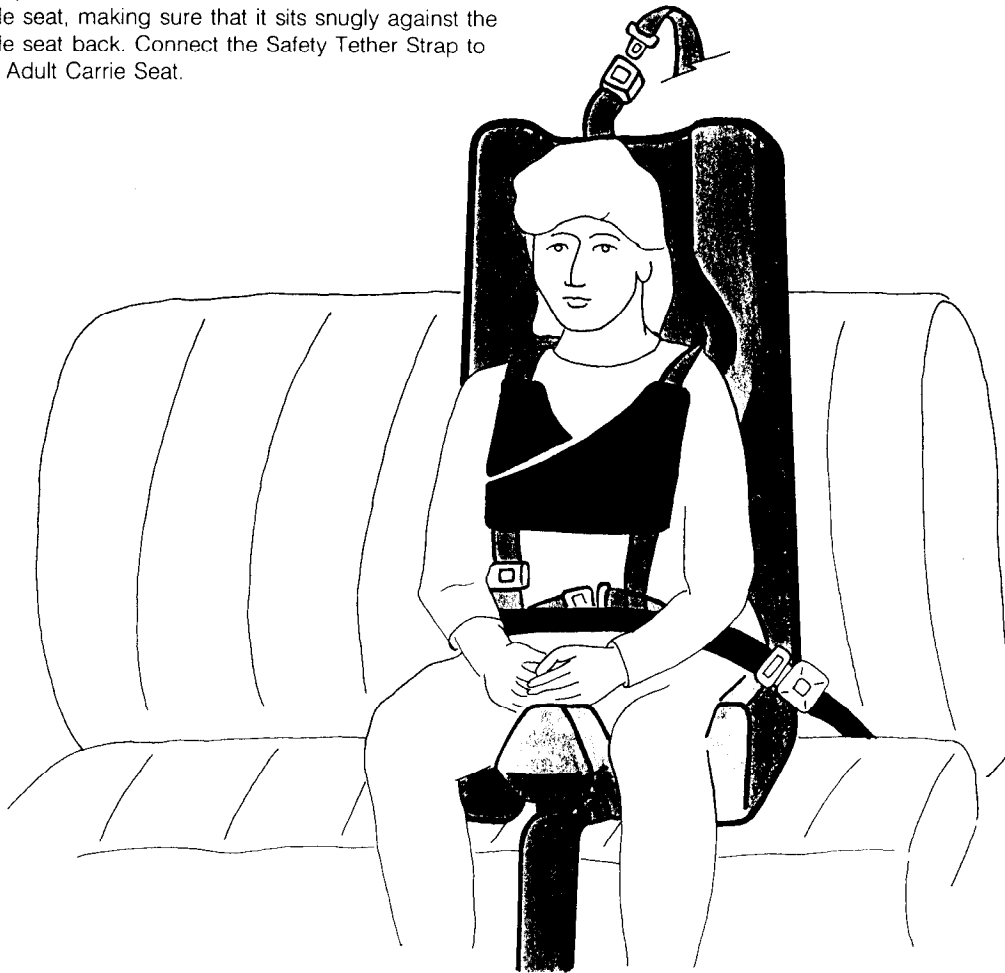
Using a Single Lap Belt with the Safety Tether Strap

(Second choice Installation of the Small Adult Carry Seat)

If a three point Lap/shoulder belt is not available, you may choose a standard auto lap belt. The Safety Tether **MUST** be used in this installation method.

The first step in using this method is the installation of the Safety Tether Anchor (See pages 4 and 5 for complete instructions). Place the Small Adult Carry Seat on the automobile seat, making sure that it sits snugly against the automobile seat back. Connect the Safety Tether Strap to the Small Adult Carry Seat.

3

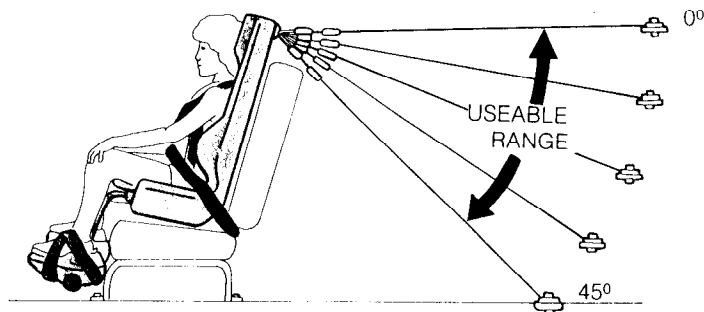


Place the adolescent in the Small Adult Carry Seat, making sure that the hips and buttocks are back snugly in the seat, fasten the positioning harness (see pages 6 through 8 for complete instructions). Pull the auto lap belt around the Small Adult Carry Seat and adolescent as shown, making sure it is tight.

Tether Anchor

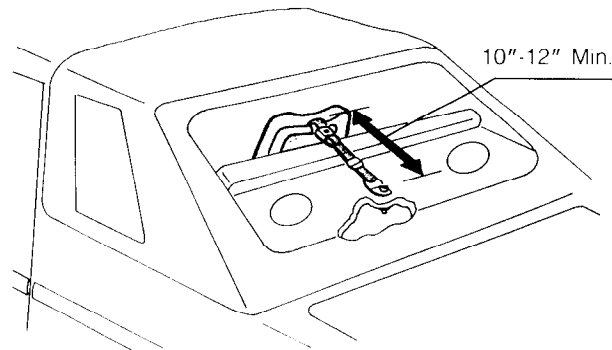
The Safety Tether Anchor is an essential part of the Small Adult Carrié Seat design and is absolutely necessary to assure crashworthiness when using a standard atuo lap belt. It will prevent the Small Adult Carrié Seat from coming forward during an impact. Failure to use the Safety Tether Strap may result in your adolescent striking the vehile interior during a sudden stop or crash.

The Safety Tether Anchor must be mounted through a metal, structurally sound, integral part of the vehicle body directly behind the seating position in which the Small Adult Carrié Seat is to be used. This may be the floor in a van or bus, or a fixed metal floor panel in the cargo area of a station wagon or hatch back. In a sedan, the anchor may be secured through the metal underbody of the rear package shelf. The most appropriate location for the Safety Tether Anchor will vary depending on the make and type of vehicle that you are using. If you have any trouble determining the most secure location for the Safety Tether Anchor, please consult your auto dealer or a competent auto mechanic.



When choosing the location for the Safety Tether Anchor, the angle between the tether strap (when tight) and the floor should not exceed 45 degrees.

4



The Safety Tether Anchor bolt should be located at least 10" to 12" from the rear of the seat to allow sufficient distance to tighten the tether strap.

Do not mount the Safety Tether Anchor within 1 1/4" of any large holes, i.e. speaker or defogger holes.

Care must be taken not to mount the Safety Tether Anchor in moldings or storage doors. If mounted through the floor, take care not to hit the gas tank, gas lines or brake lines.

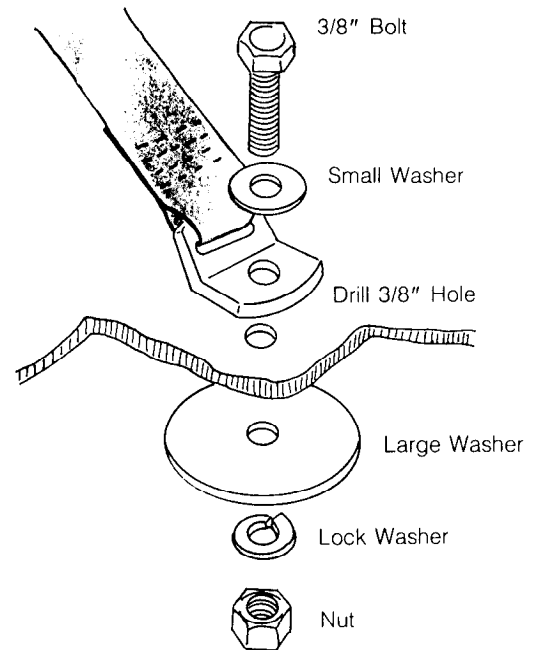
To Install the Safety Tether Anchor

Drill a 3/8" diameter hole through the body panel at the selected location.

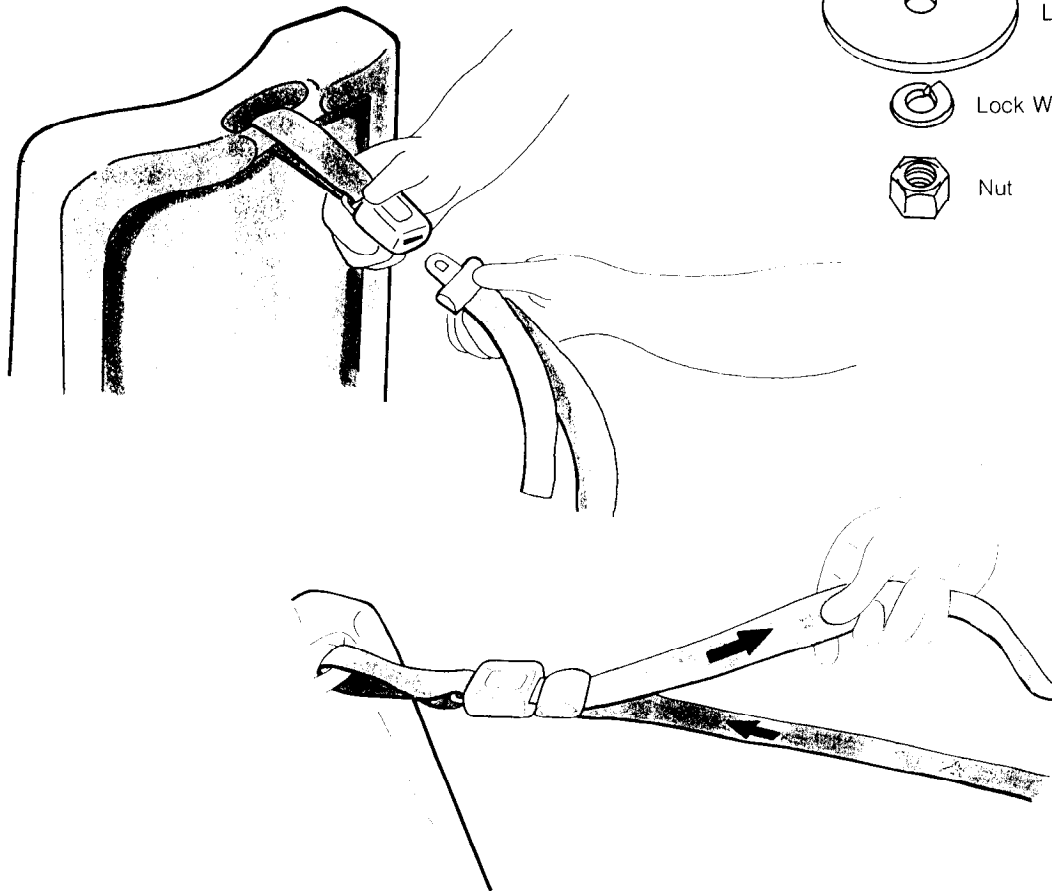
Assemble the Safety Tether Anchor through the car body as illustrated, making sure that the large washer is underneath the mounting surface.

Note: The hole must be properly sealed to prevent exhaust fumes from leaking into your vehicle.

Make sure to tighten the Safety Tether Anchor Bolt securely.



5

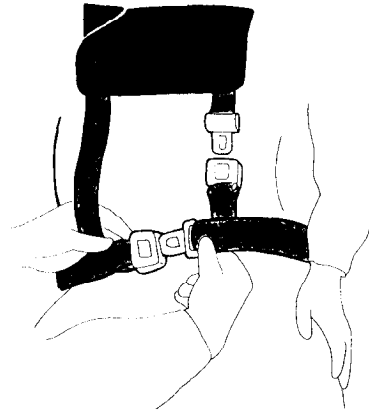
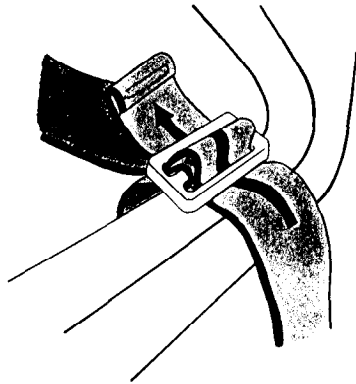


Once the Safety Tether Anchor is installed, buckle it to the seat as shown and pull the excess webbing through the Safety Tether Length Adjuster until it is tight.

Positioning Harness

To custom fit the positioning harness to the adolescent:

1. Position the adolescent in the Small Adult Carrié Seat making sure that the hips and buttocks are back snugly in the recessed bottom of the seat.

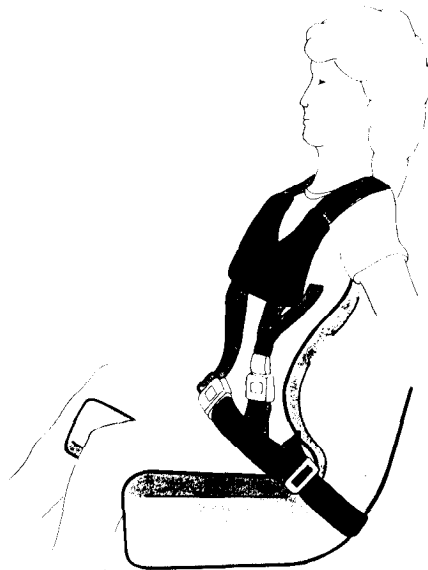


2. Buckle the hip straps together and tighten each side snugly by feeding it through it's adjustment slide

Tighten each side equally so that the buckle stays centered on the adolescent. Make sure that the hip straps are located down, across the hips of the adolescent as shown, not up in the soft stomach area.

6

3. After the hip straps are adjusted snugly, buckle the shoulder strap together. To adjust, pull the end of the shoulder strap until all slack is taken up. When adjusting remember that the shoulder strap is one piece that passes behind the seat. Always make sure that the positioning harness is adjusted snugly and all the buckles are snapped together before traveling.



Horizontal Chest Pad

Secure the Horizontal Chest Pad by wrapping it around the opposing shoulder strap and pressing the Velcro fasteners together as shown. Make sure that the chest pad is located on the chest but comfortably below your adolescent's neckline. This pad keeps the shoulder straps from sliding off the adolescent's shoulders.

Once the entire harness has been adjusted snugly, the adolescent may be easily removed from the seat. Simply unwrap the chest pad, and unbuckle the shoulder strap and hip strap buckles.

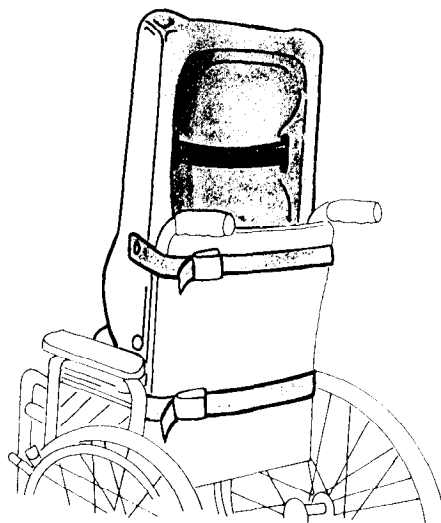


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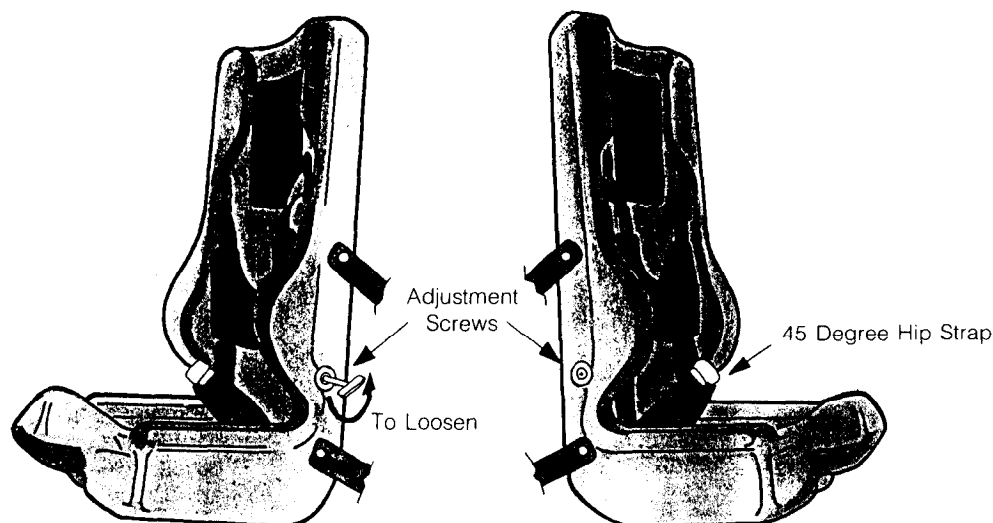


Securing Straps

The Small Adult Carry Seat has two Securing Straps that pass around the back of the seat. When the Small Adult Carry Seat is placed in a chair or a wheeled base (such as a wheelchair), the securing straps should be used to secure the Small Adult Carry Seat to the base. This is particularly important in preventing the Small Adult Carry Seat from tipping out of the base if someone leans on the tray, or if the wheeled base comes to a sudden stop.



The design of the Small Adult Carrie Seat is based on the premise that positioning the pelvis securely is the foundation of seating control and posture. The trunk tone adjustment is located at the top of the hips, allowing one to adjust the trunk tone without affecting the stability of the pelvis. This adjustment is accomplished by means of an internal frame which moves the torso up to 10 degrees forward or backward based on a 90 degree seat to back relationship.



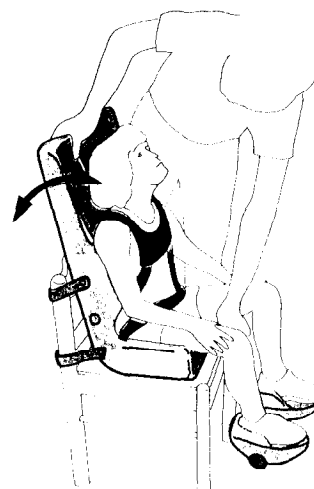
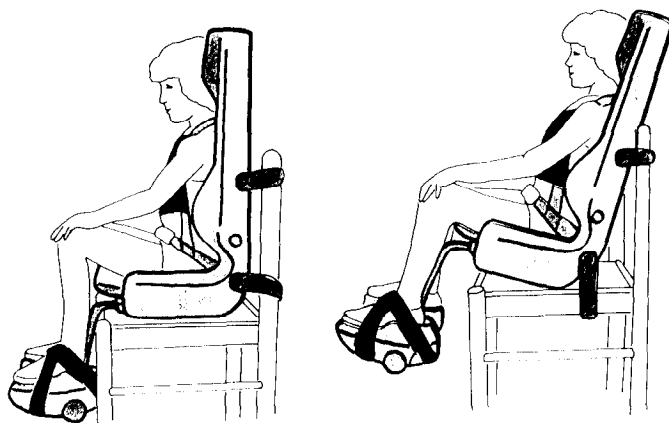
To Adjust:

Locate the adjustment screws (one on each side) and loosen them

Pull the "seat back" towards the "seat bottom" or push it away from the "seat bottom" to adjust for flexion or extension.

When optimum position is achieved, tighten both adjustment screws securely.

Check periodically to insure that the screws are tight and that the adjustment position is maintained.



Small Adult Carrie Seat Orientation:

Recline the seat to relax abnormal muscle tone.

Secure that seat when optimum position is achieved.

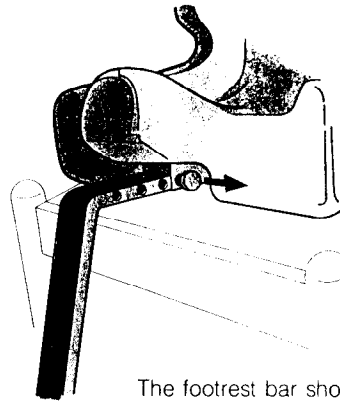
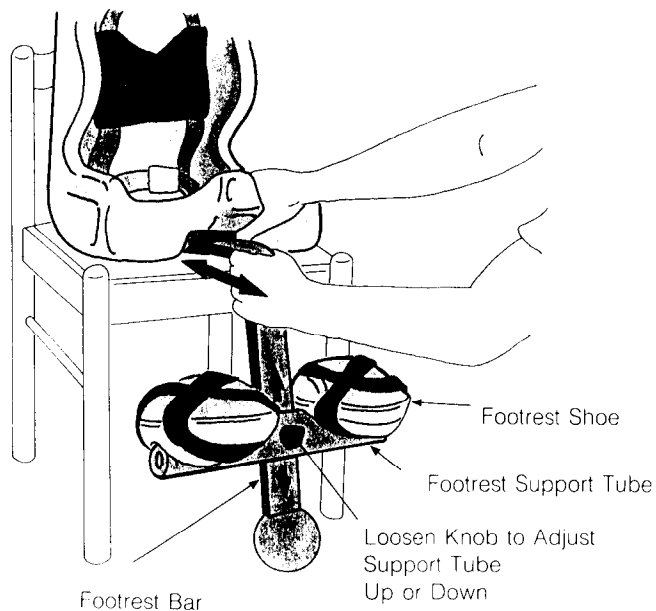
Adjustable Footrest

The Small Adult Carrie Seat Footrest is essential for proper positioning. The up and down adjustment is used to help control hip flexion and extension.

The Adjustable Footrest consists of three adjustable components:

1. The footrest bar.
2. The support tube.
3. The individual footrest shoes.

9



The footrest bar should be inserted into the bottom slot in the bracket located under the abductor. Insert the footrest bar until the spring loaded adjustment button clicks into place in the first adjustment hole. Pull the adjustment button out to move the foot rest to one of the other adjustment positions for shorter thigh lengths.

The support tube may be adjusted up and down the footrest bar by loosening the knob between the footrest shoes. This adjustment may be used to assist in controlling hip flexion or extension. When optimum position has been achieved, be sure to tighten the knob so that the support tube maintains its position.

The footrest shoes can be tilted individually for ankle dorsiflexion or plantarflexion. This is accomplished by loosening the screw located on the side of the footrest adjustment bracket. (Use the "T" handled Allen wrench packed in the literature pouch on the back of the seat.)

Be sure to tighten the screw securely after repositioning the footrest and return the wrench to the literature pouch.

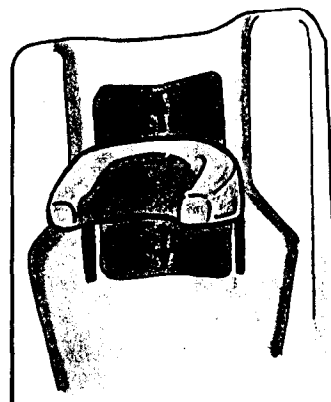
To secure the foot, cross the straps over the foot, then thread the Velcro end of the strap through the metal slide and back onto itself as shown.



Small Adult Carrie® Seat

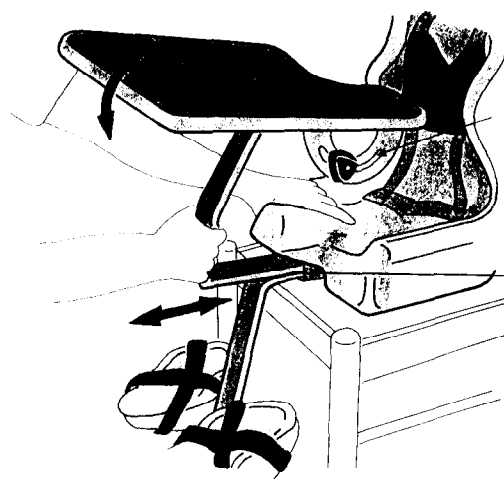
Adjustable Head Support

The head support can be adjusted up or down on the Velcro pad located at the top of the seat. The purpose of the head support is to hold the head and neck in midline without putting pressure on the occipital region.



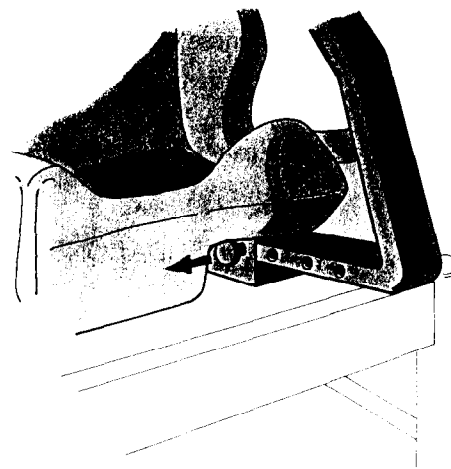
Adjustable Tray

To use the tray, insert the tray bar into the top slot of the bracket located under the abductor. Insert the bar until the spring loaded adjustment button clicks into the first adjustment hole. Pull the adjustment button out to move the tray bar to one of the other adjustment positions as shown to the right.



Loosen Knob to Adjust

Insert in Top Slot



10

The tray angle can be changed by loosening the knob on the side of the tray. Be sure to tighten the knob securely after adjusting.

WARNING: THE TRAY IS NOT PART OF THE SMALL ADULT CARRIE SEAT AS CRASH TESTED. DO NOT USE OR ATTACH IT WHILE THE SMALL ADULT CARRIE SEAT IS BEING USED AS A CHILD RESTRAINT SYSTEM.

MAINTENANCE OF THE CARRIE® SEAT

The Tumble Forms covering may be cleaned with household or industrial grade detergents, either liquid or abrasive powder types. Do not soak or immerse the cushion in water; it will take water in through the vent hole, like a sponge, and become water logged.

The Tumble Forms covering can be disinfected with alcohol or 3% hydrogen peroxide.

The harness straps can be handwashed with warm soapy water and disinfected with alcohol or 3% hydrogen peroxide. It can be scrubbed clean with a nylon brush. Do not remove the harness from the Carrie Seat.

Contact the manufacturer if:

The harness becomes worn or damaged.

The outside of the Carrie Seat becomes ripped or torn and a maintenance kit is needed.

Extra tether straps are needed.

RECOMMENDATIONS

The Carrie Seat will help you to effectively position and safely transport your handicapped adolescent or small adult. It is up to you as a parent to use the Carrie Seat according to the instructions.

Follow this safety checklist everytime your child travels in the Carrie Seat.

1. Make sure the Carrie Seat is properly installed and adjusted as per manufacturer's instructions.
2. Position your adolescent in the Carrie Seat as described in the instructions making sure all straps (including tether) are buckled and tight. You should check them **every** time you use the seat.
3. Drive safely.

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Printed in the U.S.A.

Tumble Forms® Carrie® System ... The Go-Everywhere

Seat back articulates 20° to accommodate abnormal trunk tone.

Tether straps secure seat in chair or car seat.



Provides an excellent seat for everyday use.

Height-adjustable neck stabilizer.

Four-point, comfort-adjustable harness.

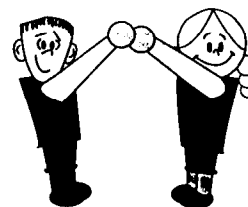
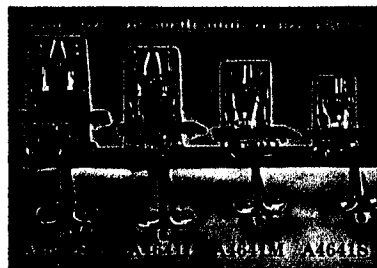
Strong, easy-clean quick-release tray.

Anti-thrust seat stabilizes pelvis.

Shoes with bar position feet for optimum comfort.



Tumble Forms makes it easier and safer to travel.



Tumble Forms®

The Carrie® System lets your client enjoy the head-to-toe security and comfort of the Carrie® Seat at home, at school, during meal time or activity time, in the car (complies with F.M.V.S.S. 213), on a plane or even strolling in the mall. It's a comprehensive system that can be used conveniently in virtually every seating situation. Does not contain latex.

Carrie® Seat. Tumble Forms® Carrie Seat solves the positioning problems in day-to-day living. You have the option to purchase the Carrie Seat alone or with a tray and shoes.

A4641S Preschool Seat with tray and shoes **\$990.00**

A9114 Preschool Seat without tray or shoes **\$610.00**

A9114S Preschool Shoes with Bar **\$227.00**

A9114T Preschool Tray with Bar **\$216.00**

A4641M Elementary Seat with tray and shoes **\$998.00**

A9115 Elementary Seat without tray or shoes **\$620.00**

A9115S Elementary Shoes with Bar **\$249.00**

A9115T Elementary Tray with Bar **\$227.00**

A4641L Junior Seat with tray and shoes **\$1,110.00**

A9116 Junior Seat without tray or shoes **\$677.00**

A9116S Junior Shoes with Bar **\$249.00**

A9116T Junior Tray with Bar **\$236.00**

A4641SA Small Adult Seat with tray and shoes **\$1,310.00**

A9117 Small Adult Seat without tray or shoes **\$711.00**

A9117S Small Adult Shoes with Bar **\$249.00**

A9117T Small Adult Tray with Bar **\$259.00**

Dimensions	Preschool	Elementary	Junior	Small Adult
Standing Height	30" - 38" (76 - 97 cm)	38" - 48" (97 - 122 cm)	48" - 58" (122 - 147 cm)	58" - 68" (147 - 173 cm)
Weight	20 - 40 lbs. (9 - 18 kg)	30 - 60 lbs. (14 - 27 kg)	50 - 100 lbs. (23 - 46 kg)	60 - 130 lbs. (27 - 59 kg)
Sitting Hip Width	6" - 8" (15 - 20 cm)	8" - 10" (20 - 25 cm)	10" - 13" (25 - 33 cm)	12" - 15" (31 - 41 cm)
Thigh Depth	8" - 11" (20 - 28 cm)	10" - 13" (25 - 33 cm)	12" - 15" (31 - 38 cm)	14" - 18" (36 - 46 cm)

6

Call toll free
1-800-323-5547
or fax 1-800-547-4333

Provides Secure Positioning Time and Activity Time



Small Feeder Seat fits infants up to 36" (91 cm).



Floor Sitter Wedge for Small, Medium and Large Feeder Seats.

Large Feeder Seat fits adolescents up to 60" (150 cm).



Floor Sitter Wedge for Extra-Large Feeder Seat.

Extra-Large Feeder Seat fits adolescents up to 72" (183 cm).

The Tumble Forms® Feeder Seat is ideal for feeding, learning or resting in a chair or stroller, or on the floor or a parent's lap. The Small and Medium-sized Feeder Seats provide an exciting feature, the anti-thrust seat, for increased pelvic stability. Deluxe Floor Sitter includes Feeder Seat and a Floor Sitter Wedge for activities and peer interaction on the floor. Wedge holds the Seat upright or in a reclining position. Feeder Seat and Wedge may be ordered separately.

Other Feeder Seat features:

- Shoulder harness slots allow 4" of vertical adjustment of the shoulder straps to accommodate children of different heights.
- Contoured interior has a 90° seat-to-back relationship to provide posturally correct seating.
- A 45° hip strap and quick-release H-belt help maintain child's position.
- Tumble Forms seamless coverings are washable, odor- and stain-resistant, impervious to urine and nontoxic.

See Feeder Seat Size Chart below for dimensions.

Feeder Seat

A2795N Small \$153.00
A2795M Medium \$198.00
A2795X Large \$287.00
A2795Y Extra-Large \$431.00

Deluxe Floor Sitter

(Includes Feeder Seat and Wedge)

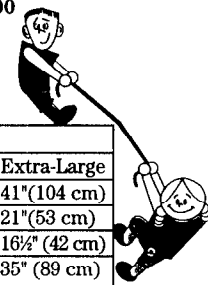
A4542B Small \$229.00
A4542A Medium \$263.00
A4542D Large \$342.00
A4542E Extra-Large \$661.00

Floor Sitter Wedge

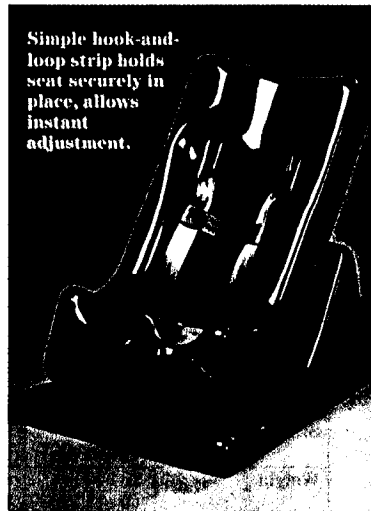
A4542W For Small, Medium and Large Feeder Seats \$142.00
A4542Y For Extra-Large Feeder Seat \$298.00

Feeder Seat Size Chart

Dimension	Small	Medium	Large	Extra-Large
Overall Height	21" (53 cm)	27" (68.5 cm)	34" (86 cm)	41" (104 cm)
Outside Width	10½" (26.5 cm)	14" (35.5 cm)	17" (43 cm)	21" (53 cm)
Inside Depth	8" (20 cm)	9½" (24 cm)	13¼" (33 cm)	16½" (42 cm)
Inner Height	18" (46 cm)	23" (58.5 cm)	29" (73 cm)	35" (89 cm)



Simple hook-and-loop strip holds seat securely in place, allows instant adjustment.

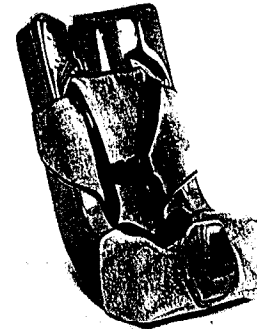


Carrie® Cozee Cover® for Feeder Seat. Soft, washable cover.

Provides comfort and absorbs moisture when extended time in Feeder Seat is necessary.

One per package.

A2785S Small \$39.05
A2785M Medium \$44.04
A2785L Large \$49.42



Note: Feeder Seat should not be used as a stroller restraint in transportation.

Call toll free
1-800-323-5547
or fax 1-800-547-4333

5

Tristander®

THE THREE POSITION, VERSATILE STANDER

-sizing GUIDE

The information below will assist you in choosing the appropriate supports for your Tristander user. These supports can be used on both standers, the Tristander 45 and Tristander 58. Tristander 58 accommodates youths 43 to 58 in. tall. Unit measures 24 in. wide by 48 in. long. Tristander 45 accommodates children 32 to 45 in. tall and measures 21 in. wide by 37 in. long. For models 4528S and 4527S footplate is standard.

TRISTANDER TRUNK SUPPORTS

	4525K Small	4526K Medium	4527K Large
Width	8 1/2"	10"	11 1/2"
Depth	5 1/2"	6 1/2"	6"

Note: Trunk width and depth should be measured around the torso a few inches below the axillae. Uppermost part of trunk support should not extend beyond the armpit height. Do not measure circumference — only front from right axillae to left axillae. (See diagrams).

HIP SUPPORTS

	4525P Small	4527P Large
Width	8 1/2"	12"
Depth	4"	6"

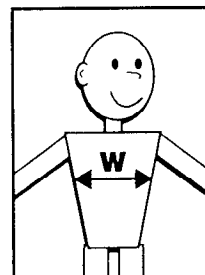
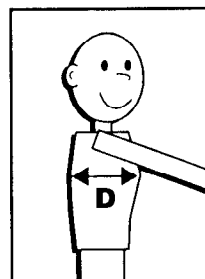
KNEE SUPPORTS

	4525N Small	4527N Large
Width	3"	4"
Depth	2 1/4"	2 1/4"

KEY:

In diagrams below

D = Depth W = Width



**SAMMONS™
PRESTON**

4 Sammons Ct
Bolingbrook, IL
60440

1-800-323-5547

SNUG SEAT

P.O. Box 1739
Mathews, NC 28106-1739

<http://www.snugseat.com>

Phone: Customer service (800) 336-7684
Other (704) 822-0668

Fax: (704) 882-0751

E-mail: snugseat.com

Product family at a glance for clinicians:

Popular name for device	Model/Order #	Useful for which diagnoses?
Spelcast	by name	children in spica/hip casts
Snug Seat 1	by name	all
Snug Seat 2	by name	all
Gorilla	by name	all
Snug Seat 1000	by name	all
Wee-Go Car Bed	Model 100	Premies, infants requiring recline

Infection control protocols or warranties available? Yes

If yes, description attached? No

History of Medicaid/insurance/state disability purchases for individuals? yes

If yes, roll call of states attached? No

Product specifications at a glance for clinicians:

Device name	Height/Length ranges	Weight ranges	Recline ranges/options	RF range	FF range	Accessories for positioning
Spelcast	23"back height 6" depth	10-40 lbs.	-	to 20 lbs.	to 40 lbs.	
Snug Seat 1	22"back height 10" deep	40 lbs. max	0-35 degrees	none	40 lbs. max	foot plate standard positioning pad kit
Snug Seat 2	28"back height 14" deep	20-70 lbs.	-	none	20-70 lbs.	positioning pad kit, abductor
Gorilla	28"back height	20-105 lbs.	10 degrees with angle wedge	none	20-105 lbs.	pads-exterior and interior, abductor, wedge seat, seat wedges
Snug Seat 1000	24"back height 10" deep	30-60 lbs.	0-10 degrees	none	30-60 lbs.	tray, positioning pads
Wee-Go Car Bed	up to 29 ½ in.	up to 21 lbs.		N/A	N/A	Standard bunting. Customized bunting available on request

Product installation specifications at a glance for clinicians:

Appropriate vehicle environments: (check any that apply)

☒ Cars, vans, pickups ☒ School buses ☒ Ambulances ☐ Other (specify):

Product name	Tether needs/ Cam wrap needs	Tether/cam kits standard?	Installation assessment alerts
Spelcast	NO	NO	
Snug Seat 1	tether	YES	
Snug Seat 2	tether	YES	
Gorilla	tether	YES	
Snug Seat 1000	NO	NO	belt positioning booster-vehicle must have lap and shoulder belt
Wee-Go Car Bed	NO	NO	

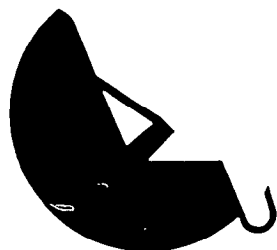
Purchasing programs for professionals or community programs: Programs in place for most Organizations and groups. Institutional and governmental pricing available for all products.

Snug seat supports a strong, well trained nationwide dealer network.

Price range categories:

Product name	Under \$50	\$51 – \$200	\$201 – \$500	\$501 – over
Spelcast			X	
Snug Seat 1				X
Snug Seat 2				X
Gorilla				X
Snug Seat 1000			X	
Wee-Go Car Bed			X	

Other manufacturer comments regarding issues for medical/disability clinicians and safety specialists? Snug Seat staff available at 1-800-336-SNUG to help with product questions or to discuss general transportation issues.



SNUG SEAT®

INCORPORATED

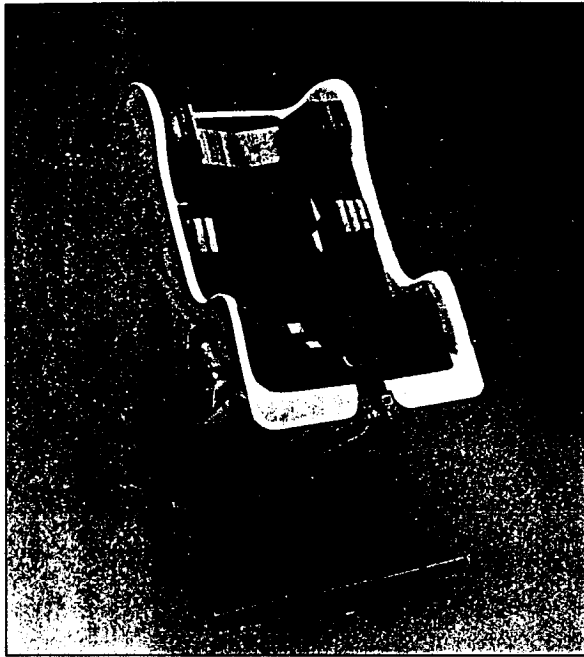


SNUG SEAT® 1 SEATING SYSTEM.

A completely adjustable postural seating system designed for infants and children up to 40 lbs. The Snug Seat® 1 system provides proper positioning, support and adjustability without looking like 'special' equipment.

THE SNUG SEAT® 1 SEATING SYSTEM OFFERS A NEW DIMENSION IN SPECIALIZED POSTURAL SEATING SYSTEMS.

Now, you can finally have a custom-fitted, postural seating system without the delays normally involved in custom manufacturing — The Snug Seat® 1. With the Snug Seat® 1, a therapist or trained professional can fit a child on-site, place the cover over the seat shell and let the child realize immediate use of the seat without delay.



The Snug Seat® 1 Concept.

The versatility and good looks of the Snug Seat® are shown when it is placed in any of its three specially adapted mobility bases. As can be seen, when the attractive fitted cover is placed over the pad system, the Snug Seat® 1 then resembles many car seats already available to the general public. The cover is available in a wide range of colors.

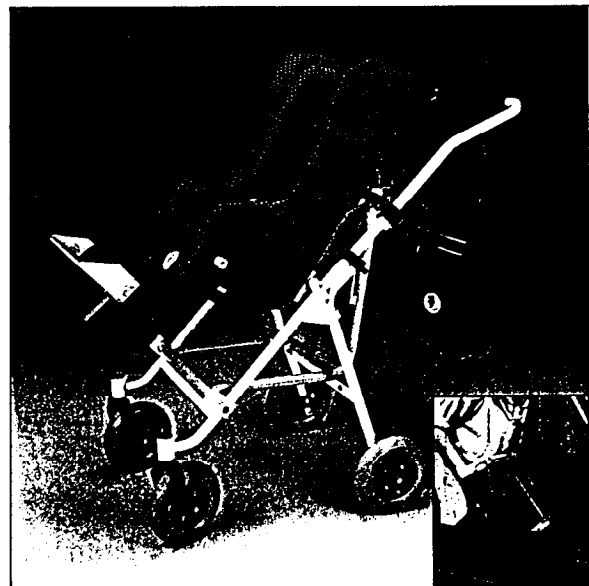
ADDITIONAL FEATURES.

- Solid pneumatic-like 8-inch wheels with dual sealed precision bearings for smooth mobility.
- Foot-activated brakes.
- Folds easily to fit into car trunk.
- Mounting hardware available to mount other seated positioning systems in the Snug Buggy®.
- Medical essentials holder fits on specially mounted hooks on the back of the Snug Buggy®.
- Accommodated medical equipment needs, such as a ventilator on an under-carriage tray, Oxygen tanks and suction equipment.
- Sun Canopy available.

The Snug Seat® 1 is a custom molded seat shell in a steel frame with a unique pad positioning system which allows for ongoing modifications in the chair's shape. A set of forty waterproof polyethylene pads of different sizes and shapes is included with each Snug Seat® 1 to permit on-site customized fitting for each child. The pads can be continually adjusted to provide necessary head, thoracic, lumbar, and pelvic support. Modifications can easily be made as the child grows and develops.

ADDITIONAL FEATURES.

- Promotes symmetrical sitting postures and decreases risk of severe skeletal deformities.
- Adjustable seat depth.
- 5-Point positioning/safety restraint system.
- Optional tether strap for added safety.
- Fits into 3 optional mobility bases.
- Serves as a car seat when buckled in according to manufacturer instructions.
- 0 to 35 degree tilt-in-space possible using the gas spring adjustment underneath the seat (not recommended for use when being utilized as a car seat).



The Snug Buggy® Heavy Duty Folding Base with the Snug Seat® 1.



THE SNUG SEAT® 1 SEATING SYSTEM IS VERSATILE.

The Snug Seat® seating system is extremely versatile for today's busy families. Whether at home, school, or along the way, we have a mobility base perfectly suited for the occasion.



The Snug Seat® 1 shown in optional lightweight folding base.

NOT
AVAIL.



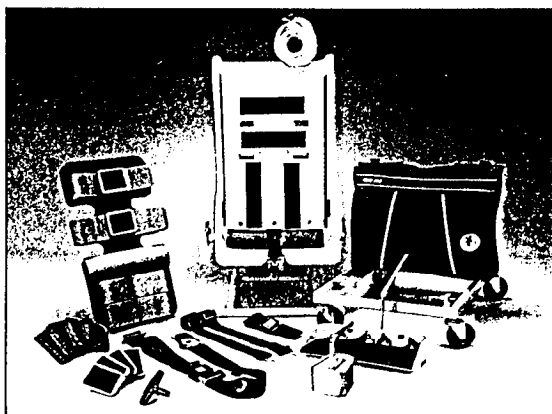
The Snug Seat® 1 shown in optional trolley base (Classroom/Transport Mobility Base).

ADDITIONAL FEATURES.

- Lightweight folding mobility base with foot-activated linked braking system.
- Multi-positional acrylic tray available with front to back, height and angle adjustability.
- Sun Canopy available.

ADDITIONAL FEATURES.

- Excellent for preschool classroom and home use.
- When Snug Seat® 1 is placed in the trolley base, it places child at preschool table height of about 18 inches.
- Aids in peer interaction, communication, and feeding activities.
- Utilizes less floor space than other bases.
- Has safety lock, rear caster locks and swivel casters for easy mobility.



The Snug Seat® 1 shown with standard and optional components and accessories.

STANDARD COMPONENTS.

- 2 Seat Depth Pads (Backrest Pads) 1" and 1½".
- 1 Wedge Shaped Bottom Pad.
- 12 Small Rectangular Positioning Pads.
- 12 Large Rectangular Positioning Pads.
- 6 Small Wedge Shaped Positioning Pads.
- 6 Large Wedge Shaped Positioning Pads.
- 1 Lumbar Roll
- 1 Foam Backed Washable Cover in choice of colors.
- 5-Point Safety/Restraint Belt System with Chest Pad.

- 1 Footplate with Adjustable Straps and Height Adjustable Bar.
- 1 Hand Type Allen Adjustable Wrench.
- 1 Snug Bug® Stuffed Animal.
- 1 Owners Manual which includes Fitting Instructions.

OPTIONAL COMPONENTS AND ACCESSORIES SHOWN:

- Accessory Tray (For Ventilators, Suction Machines, Monitors, etc.
- "Snug Sac" Medical Essentials Holder.
- Trolley (Classroom/Transport Mobility) Base.

DIMENSIONS AND SPECIFICATIONS OF SNUG SEAT® 1 SYSTEM.

COMPONENTS	WEIGHT	BOXED WEIGHT	DIMENSIONS
Snug Seat® 1	24 lbs.	26 lbs.	22h x 14w x 11d
Heavy Duty Base	16 lbs.	22 lbs.	38h x 21w x 27.5d
Trolley Base	9 lbs.	10 lbs.	5h x 18L x 15.5w
Tray	5 lbs.	6 lbs.	18L x 14w

COMPONENTS	SPECIFICATIONS
MAXIMUM WEIGHT OF CHILD**	40 LBS.
Seat Back Height	22 inches
Outside Height of Seat	26 inches
Outside Length of Seat	14 inches
Seat Depth	11 inches
Seat Width	12 inches
Height of Shoulder Straps	9.5 inches & 13.5 inches
Width of Footplate	11.8 inches
Depth of Footplate	5 inches
Leg Drop Adjustment	5.5 inches to 10.5 inches
Tilt-In-Space Adjustment In Seat	0 To 35 Degrees
Minimum Angle On Mobility Base	90 Degrees
Abductor Wedge Distance From Back To Front of Abductor	6.5 inches to 8.5 inches

**The Snug Seat® 1 was dynamically crash tested in the forward facing position with a 40 pound test mannequin and is recommended for use with a child weighing a maximum of 40 pounds or less. The Snug Seat® 1 meets and exceeds the Federal Motor Vehicle Safety Standard #213 which covers child restraints. It is imperative that each child be properly restrained using the shoulder and lap belts provided with each Snug Seat® 1.



SNUGSEAT®
INCORPORATED

TECHNOLOGIES FOR MOBILITY
POSITIONING & TRANSPORTATION

For More Information On Our Product Lines Call

1.800.336.7684

Or write for a free brochure to:

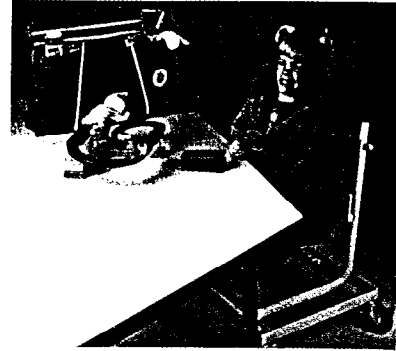
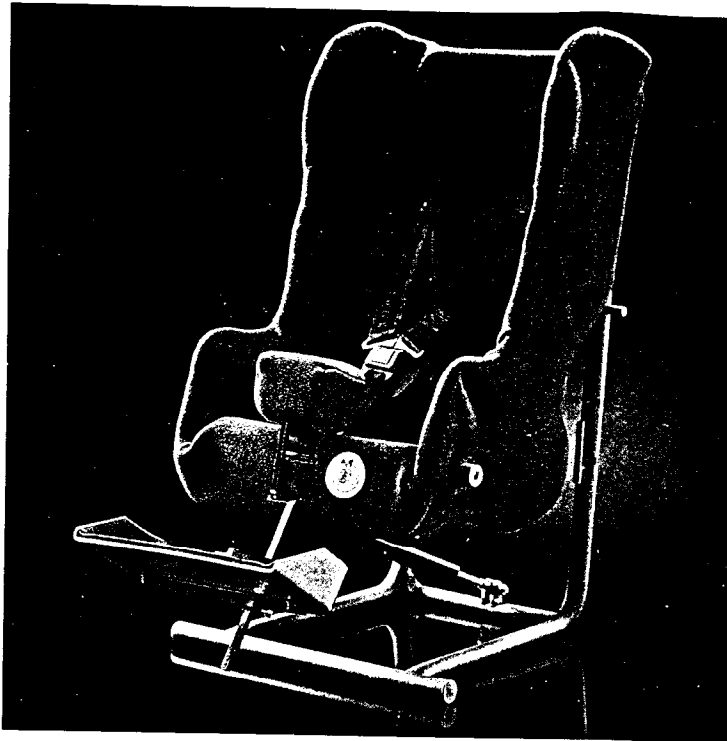
Snug Seat, Inc., P.O. Box 1739, Matthews, NC 28106

For Sales and Service Information
Please Contact Your Local Snug Seat® Dealer.

Your Snug Seat® Dealer Is:

Snug Seat® Products are Made In The U.S.A.

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SNUGSEAT 1[®]

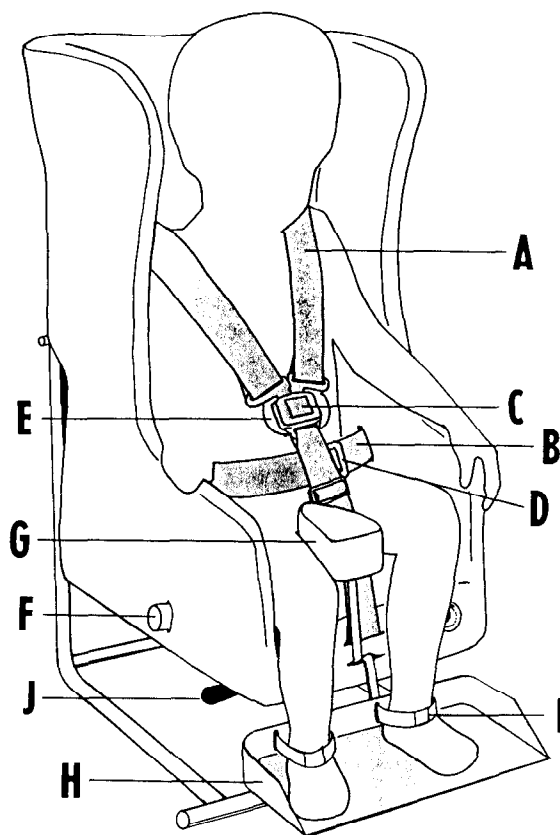
IMPORTANT!

**PLEASE READ AND SAVE THESE INSTRUCTIONS
IN THE POUCH ATTACHED TO THIS UNIT!**



Instructions For Snug Seat[®] 1
Postural Seating System
And Automotive Safety Seat.

Important Component Locations Of Snug Seat® 1



A. Shoulder Straps.

Adjust these to restrain the child's upper body against the back of Snug Seat® 1.

B. Pelvic Belt Strap.

Adjust to position the child's hips in the most rearward portion of Snug Seat® 1.

C. Shoulder-Crotch Strap Buckle.

Insert both shoulder straps into this buckle until you hear a "click".

D. Pelvic Belt Buckle.

Insert the two ends together until you hear a "click".

E. Chest Protection Pad.

Attach to the back of buckle "C".

F. Tray Attachment Points.

Do not use the tray in the car.

G. Abductor.

Position, then tighten the attachment screw.

H. Footplate.

Position, then tighten the attachment screw.

I. Footstraps.

Fasten the straps securely around the child's shoes.

J. Seat Recline Lever.

Pull lever forward to change angle of seat position.

READ AND FOLLOW THESE INSTRUCTIONS EXACTLY!

The SNUG SEAT® 1 conforms to United States Federal Motor Vehicle Safety Standard 213 (FMVSS 213*) and Canadian Motor Vehicle Safety Standard 213.3* IF CORRECTLY USED. It is designed for occupants weighing between 18 and 40 lbs. (8.16 and 18.14 kg), and up to 45 inches (114.3 cm) in height.

The installation of this seat to a vehicle is by means of the vehicle lap belt and tether strap.

WARNINGS!!

Failure to follow each of the following instructions can result in your child striking the vehicle's interior during a sudden stop or crash. This child restraint **MUST** be secured with a vehicle belt and tether as specified in this instruction booklet.

- Do not modify the frame, shell, or belt systems of this child restraint device.
- Do not use this seat if the occupant's head extends above the top of the seat.
- Do not remove the shoulder, crotch, or lap belt from the seat for use as a separate item.
- This seat **MUST** be replaced if damaged, badly worn, or involved in an accident.
- Car interiors can become very hot when exposed to direct sunlight. Metal fittings on the belts will become hot when subjected to high temperatures, and could burn your child. Cover all fittings exposed to direct sunshine which come into contact with your child.
- Do not place loose or heavy objects on the vehicle parcel shelf. These objects could injure a child in the SNUG SEAT® 1 during sudden stops or accidents.
- According to accident statistics, children are safer when properly restrained in the rear seating posi-

*See Page 8 For More Information.

tions. Place the SNUG SEAT® 1 in the center of the vehicle's rear seat when possible.

- The SNUG SEAT® 1 should be securely belted to the vehicle, even when it is not occupied, since in a crash, an unsecured child restraint may injure other occupants.
- The tether supplied with this seat must be used at all times to ensure the safety of the occupant of the SNUG SEAT® 1.
- Do not use the SNUG SEAT® 1 on side-facing or rear-facing seats.
- Do not use the SNUG SEAT® 1 in autos with "Passive Restraints". (A Passive Restraint is one in which the auto lap belt automatically surrounds the driver's or passenger's waist when the door is closed.)

PREPARING THE SEAT FOR YOUR CHILD

IT IS IMPORTANT THAT THE SNUG SEAT® 1 BE PROPERLY SET UP AND ADJUSTED BEFORE PUTTING IT INTO A VEHICLE. This will require you to adjust the shoulder strap heights, and strap and belt tension as described as follows:

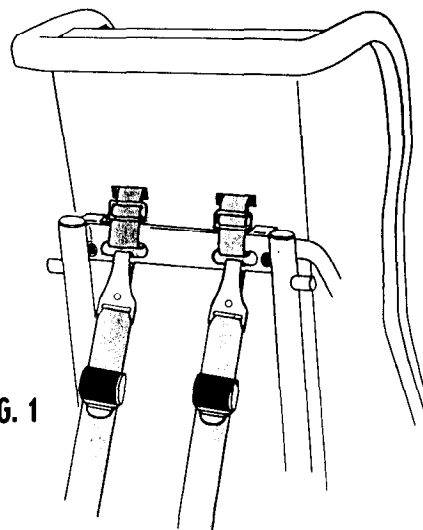


FIG. 1

POSITIONING THE SHOULDER STRAPS

There are two sets of slots in the back of the seat which are provided for your child's comfort and security (See Fig. 1). The slots are the following height from the seat base.

TOP	15"
2nd	11"

Put the child in the seat and select the slot just above the child's shoulders.

To change to your selected slot, the strap must be removed from the buckle. Fig. 2 shows how to properly rethread the shoulder strap through the buckle.

IMPORTANT: Shoulder strap adjuster must be threaded exactly as shown.

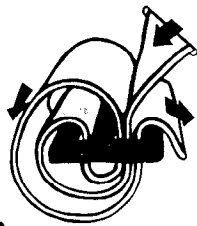


FIG. 2

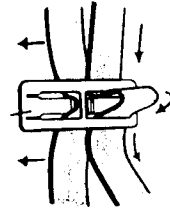
ADJUSTING TENSION OF CHEST HARNESS AND SEAT BELT

To tension the chest harness - pull strap through the buckles located on the back of the seat. Make sure that there is no excess slack in strap. Allow two fingers of slack between shoulder straps and your child's chest. See Fig. 2 for correct routing of the strap through the buckle.

To tension the seat belt - pull strap slack through the buckles located on either side of the seat. Allow two fingers of slack between seat belt and your child's body. See Fig. 2 for correct routing of the strap through the buckle.

4

FIG. 3



A harness tie is provided with each system to assist in keeping the straps on child's shoulders. See Fig. 3 for proper routing.

IMPORTANT: Car seat straps must be properly threaded to ensure CHILD'S maximum safety during a sudden stop or accident.

INSTALLATION AND USE

SECURING THE SEAT IN A MOTOR VEHICLE

The SNUG SEAT® 1 is designed to face forward in your vehicle. Position the seat assembly in the upright position EXACTLY as shown (See Fig. 4), and pass the adult lap belt strap through the restraining bars.

Attach the tether according to instructions found later in book (see "Use of Tether Straps" section).

IMPORTANT!

Never place your vehicle's seat belt around the front of the SNUG SEAT® 1.

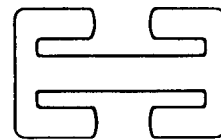
LOCKING CLIP

(Included with all systems) (See Fig. 5)

A locking clip must be used to secure the SNUG SEAT® 1 when your car has a shoulder and lap belt with a sliding tongue.

NOTE: Failure to use a locking clip could cause injuries to your child from the seat tipping over during normal braking or turning.

FIG. 5
Locking Clip



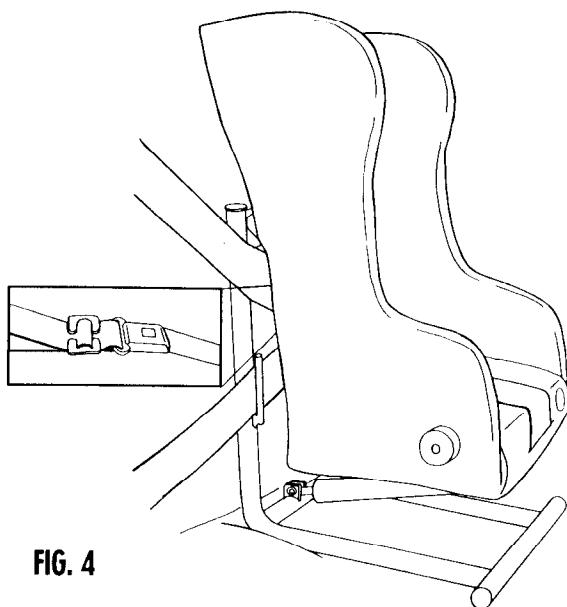
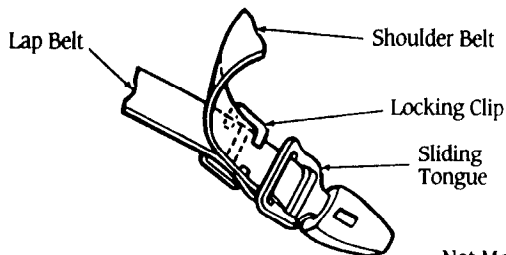


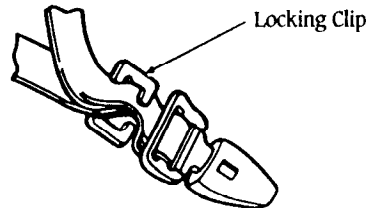
FIG. 4

INSTALLATION OF LOCKING CLIP:

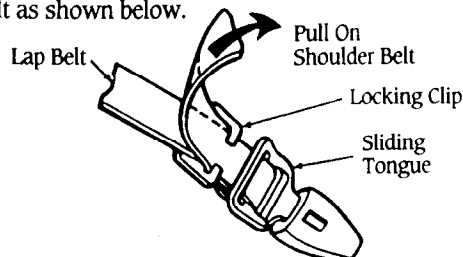
1. Thread the belt webbing through the SNUG SEAT® 1 as shown in Fig. 4.
2. Buckle seat belt. Pull on the shoulder portion of the auto seat belt to make the lap portion fit snugly.
3. Slide any corner of the locking clip over both layers of webbing as shown in the following illustration.



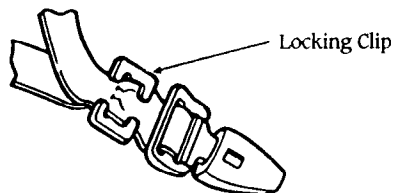
4. Pinch both opposite edges of webbing together and insert them into the locking clip slot as shown below.



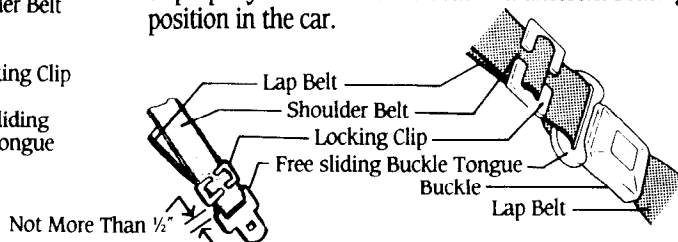
5. Tighten the lap belt by pulling on the shoulder belt as shown below.



6. Insert both layers of webbing into the other slot of the locking clip in the same manner as step 4, and slide locking clip to within approx. 1/2" of sliding tongue.



7. Forcibly tilt the child seat from side to side and also tug it forward to see if it is held securely in place. If excess movement occurs, repeat steps 3 through 7 or properly install the child seat in a different seating position in the car.



Once you have attached the SNUG SEAT® 1, test the seat before you place the child in it. Tilt the seat from side to side. Also try to tug the seat forward. Check to see if the belt holds the seat in place. If the safety seat is not anchored properly, the child's chances of being injured in a collision or sudden stop greatly increase.

This adjustment is designed to be retained until the seat is repositioned.

PUTTING THE CHILD IN THE SNUG SEAT® 1

Put child into the SNUG SEAT® 1. Child's bottom and back should be flat against the seat and back to ensure maximum safety and comfort. Buckle the pelvic (lap) belt. Remove excess slack from the pelvic belt, making sure it snugly secures the pelvic area to the seat. Pass the shoulder straps over each of the shoulders, insert both of the buckle tongues into the crotch strap buckle, and remove excess slack in the straps. The shoulder straps should firmly retract the shoulders against the SNUG SEAT® 1 back. The shoulder straps should be snug enough for only two fingers-widths of slack between the straps and the child. All buckle tongues should "click" into position when properly engaged.

To release the lap or shoulder straps, press the red button found in the center of each buckle.

WARNING!

After securing the child in the SNUG SEAT® 1, ensure that the auto lap belt and tether belt, which secure the SNUG SEAT® 1 to the vehicle, are fully tightened. Also check to make sure that the lap and shoulder belts found within the SNUG SEAT® 1 are snug and fully engaged. Failure to secure these belts in accordance with these instructions will reduce the effectiveness of the SNUG SEAT® 1 in an accident, possibly causing injury to the occupant.

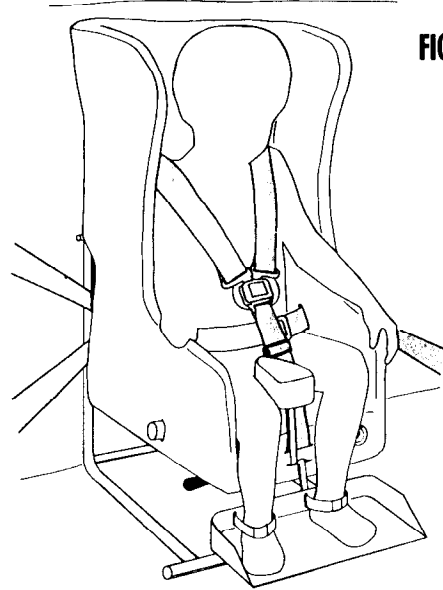


FIG. 6

COMFORT ITEMS

HEAD SUPPORT PADS

These are available as an upgrade option. They are filled with a support grade foam. The head support pads are held in place by tie strings passing through the back of the seat, and secured by cord locks. To adjust the height of the head pads, depress the pin on the cord locks, and provide some excess slack in the tie string. Move the head pad to the desired position, and take up the slack in the cord locks to secure the tie string. Repeat for the other head pad.

POSTURAL PAD KIT

Positioning is accomplished with the use of the pad kit. These pads are necessary for children needing substantial trunk or head support. To ensure the proper fitting of these pads, please consult a therapist or medical equipment dealer with recognized seating expertise.

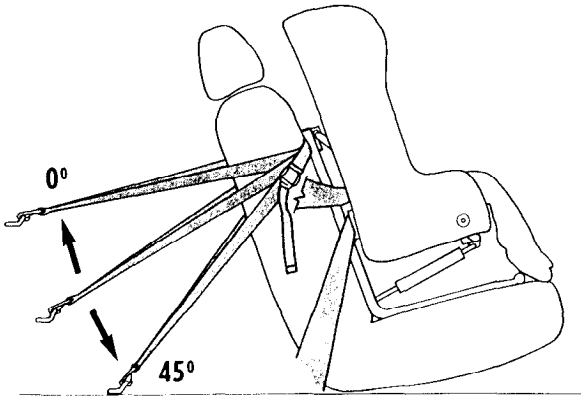
USE OF TETHER STRAPS

The tether anchor is an essential part of the SNUG SEAT® 1 design and is absolutely necessary to assure crashworthiness. Most vehicles come factory equipped with pre-drilled holes for tether mounting. The tether must be mounted through a metal, structurally sound, integral part of the vehicle body directly behind the seating position in which the SNUG SEAT® 1 is to be used. This may be the floor, such as in a van or bus, or the fixed metal floor panel of the cargo area found in a wagon or hatchback. In a sedan, the anchor may be secured through the metal underbody of the rear package shelf.

The most appropriate location for the tether anchor will vary depending on the make and type of vehicle. When choosing the location for the tether anchor, the angle between the tether strap (when tight) and the floor should not be more than 45 degrees.

If you have trouble determining the most secure location for the tether anchor, please consult your auto dealer or a competent auto mechanic.

Positioning for tether anchor.



WARNING!!

Do not mount the tether anchor in moldings or storage doors. If mounted through the vehicle floor, take care not to hit the gas tank, gas lines, brake lines, exhaust pipes, cables, etc.

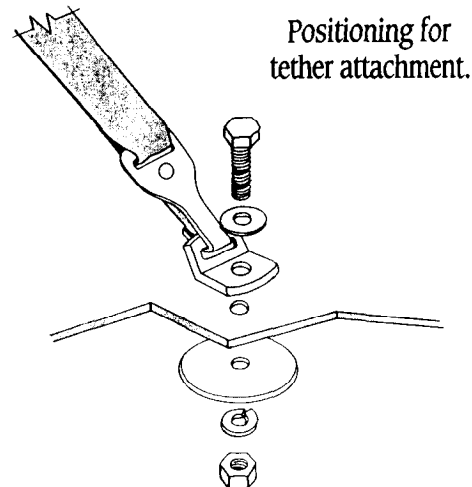
Do not mount the tether anchor within 1¼" of any large holes. The tether anchor bolt should be located at least 10"-12" to the rear of the SNUG SEAT® 1 to allow sufficient distance to tighten the tether strap.

INSTALLATION

The tether anchor must be assembled through the car body as illustrated, making sure the large washer is underneath the mounting surface.

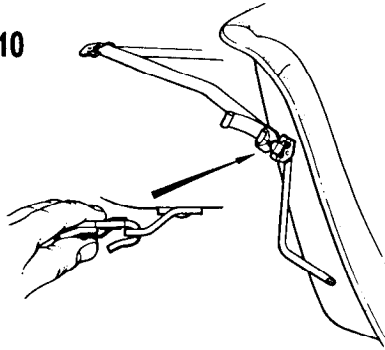
NOTE: The hole must be properly sealed to prevent exhaust fumes from leaking into your vehicle.

Make sure the anchor bolt is tightened securely.



Once the anchor is installed, pull excess webbing through the tether length adjuster (with tether attached to child seat) until it is tight. Always make sure the tether strap is buckled and adjusted snugly before driving (See Fig 10).

FIG. 10



USING THE SNUG SEAT® 1 IN THE FRONT SEAT

We do not recommend the use of the SNUG SEAT® 1 in the front seat of your vehicle. However, there are some disabled children that require constant observation and must be near the care giver/driver. If the

SNUG SEAT® 1 must be placed in the front seat and your vehicle has bench seating, it should be located only at the center front seating position with the tether straps going over the back of the bench seat. If your vehicle has bucket seating, the SNUG SEAT® 1 must be located and centered in the individual seat and the tether straps must go around the sides of the bucket seat.

NOTE: Do not use the front seat if the tether strap does not securely lock into place. Do not attach tether strap to a "Passive Restraint".

WARNING!!

Failure to follow each of the installation instructions can result in your child striking the vehicle's interior during a sudden stop or crash.

An Explanation Of Motor Vehicle Safety Standards

The SNUG SEAT® 1 conforms to United States Federal Motor Vehicle Safety Standard 213 (FMVSS 213) and Canadian Motor Vehicle Safety Standard 213.3 when used correctly. It is designed for children weighing up to 40 lbs. (18.14 kg), and up to 45 inches (114.3 cm) in height.

Both standards specify the minimum performance for child restraint systems used in motor vehicles for children weighing less than 50 lbs. (23 kg), and establish dynamic tests for measuring performance.

Criteria for both American and Canadian standards are based on a 30 m.p.h. frontal impact. Limits are established on the amount of force that can be exerted on the head and chest of a child-sized dummy. Limitations are also set on the permissible amounts of head and knee excursion.

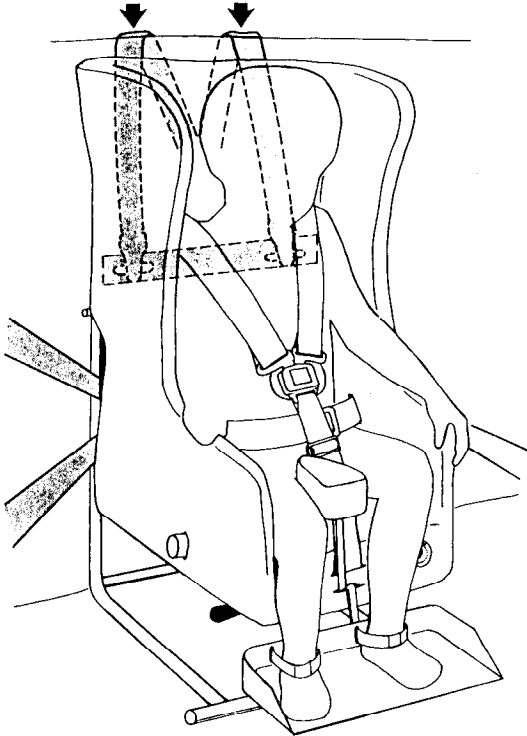
According to FMVSS 213, the dummy's head should not move forward more than 32 inches (81 cm). Canada sets head excursion limits at 28.4 inches (72 cm). Knee excursion limits are 36 inches (91 cm) for both the United States and Canada.

Additionally, during the test no load-bearing or any structural part of the system shall separate so as to create a jagged edge. The restraint system cannot shift to allow the child to "submarine", that is, to allow the child to slide down and out of the restraint.

The SNUG SEAT® 1 has been dynamically sled-tested (crash-tested) and meets or exceeds both United States and Canadian standards. Further information and documentation of these tests is available upon request.

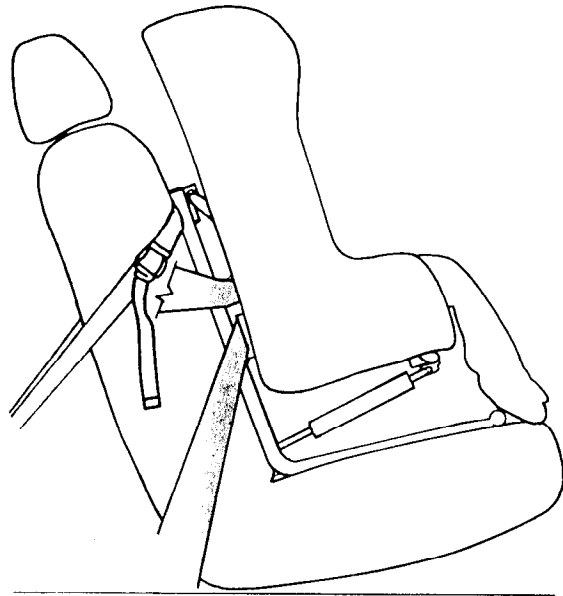
Correct Positioning Of Snug Seat® 1 In Front Car Seat With Belts

Correct positioning of SNUG SEAT® 1
in bench seat with seat belts and tether.



Note placement of tether belt
OVER top of bench seat.

Correct positioning of SNUG SEAT® 1
in bucket seat with seat belts and tether.



Note placement of tether belt
AROUND sides of bucket seat.

HOW TO MAKE THE SNUG SEAT® 1 TILT

There is a black lever in the left underside of the SNUG SEAT® 1. Pull the lever toward you to raise and lower the seat. When lowering the seat you will need to pull the lever forward and push down on the seat simultaneously.

GAS SPRING ADJUSTMENT

1. To properly adjust the gas spring, remove the nut and bolt passing through the SNUG SEAT® 1 Basket and gas spring front clevis (Cast part found on the front of the gas spring. This part holds the release lever.) This will allow you to remove the gas spring from the front of the basket on the SNUG SEAT® 1 frame.

2. Loosen the lock nut behind the clevis. Turn the front clevis ½ turn in a clockwise direction. Reattach the clevis to the front of the basket, by inserting the bolt, but leave the lock nut unattached until the adjustment is complete.

3. Push the release lever towards the back of the unit. If the gas spring extension shaft extends, remove the gas spring from the front of the basket, and loosen the clevis ½ turn. Repeat this operation until the shaft

will no longer extend when the lever is pushed towards the back of the unit. At this point, the shaft should extend by pulling the lever forward.

4. Tighten the lock nut behind the front clevis to secure the clevis in place.

5. Rotate the release lever clockwise until the release lever is at the 3:00 position, while facing the front of the SNUG SEAT® 1.

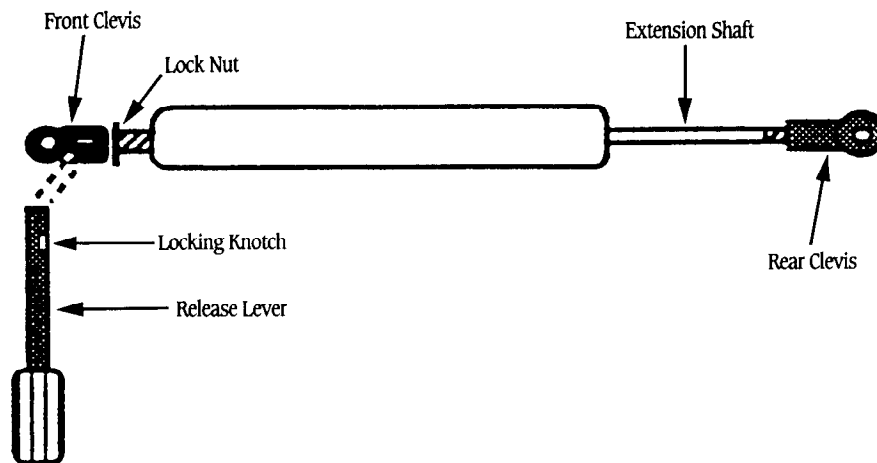
6. Return the front clevis to the front of the basket and secure tightly with the bolt and lock nut.

FIX A LOOSE RELEASE LEVER

On some of the early versions of the SNUG SEAT® 1, the release lever would occasionally come loose from the front clevis. This occurred because the release lever had too shallow of a locking notch.

To correct this, loosen the front clevis, and remove the release lever. Carefully grind out the notch in the release lever approximately 3/16". Reinstall the release lever. It should now be firmly secure in the clevis.

If you or your dealer does not want to make this repair, please contact Snug Seat, Inc. directly at 1.800.336.7684, and we will send you a new release in exchange for your original.



MOBILITY BASE OPTIONS

1. LIGHTWEIGHT STROLLER BASE ADAPTED FOR THE SNUG SEAT® 1

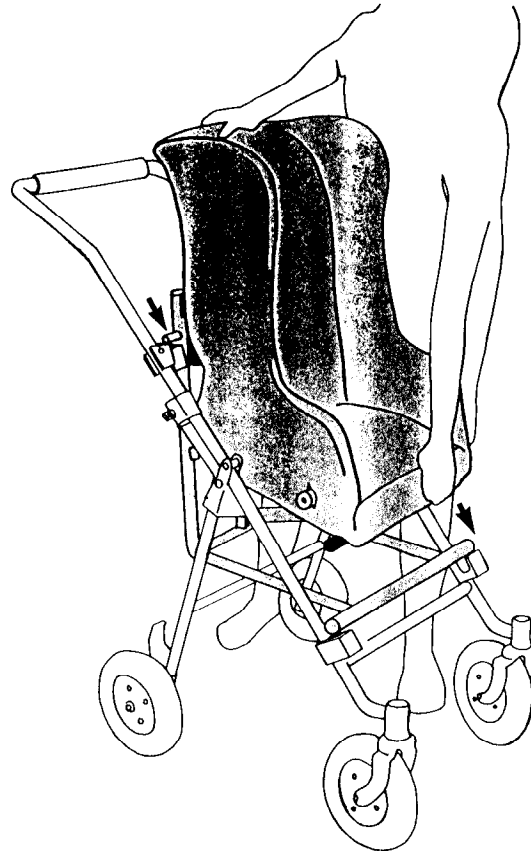
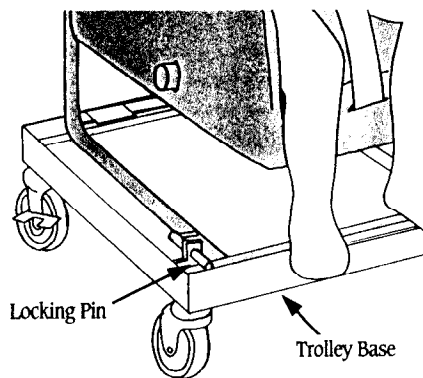
The SNUG SEAT® 1 is placed into the white nylon stroller brackets front bar first and rear bar last. The optional cotter locking pin is pulled out and replaced in the bracket for security (see the attached instructions with your lightweight stroller for operation and use.). There is a piece of webbing attached to the stroller to keep the stroller folded when carrying or storing.

2. HEAVY DUTY STROLLER BASE ADAPTED FOR THE SNUG SEAT® 1 ("Snug Buggy")

The SNUG SEAT® 1 is placed into the white nylon stroller brackets front bar first and rear bar last. The optional cotter pin is pulled out and replaced in the bracket for security. The brakes are located on each side of the rear wheels and are activated by pressing your foot on the bottom part of the brake. To release the brake the top part of the brake is pressed.

HOW TO FOLD THE "SNUG BUGGY"

Slide the white plastic brackets on either side of the stroller down the tubing and over the release button so that they are snug. These must be secure so that the stroller will not fold up while the SNUG SEAT® 1



is placed in it. Fold the "Snug Buggy" by sliding both white plastic brackets toward you and with your hands on the foam grip, pull the handle bar forward until the stroller folds. With your right hand holding the stroller you may secure the piece of clasped webbing around both sides of tubing to hold the stroller together for carrying and storing.

3. TROLLEY BASE (Classroom/Transport Mobility)

The SNUG SEAT® 1 is placed into the trolley base rear bar first and front bar last. The spring locking pin must be fully engaged to secure the SNUG SEAT® 1 into the trolley. The locking pin is activated by pulling and turning until the pin locks. The rear brakes on the casters are activated by pressing the "On" or "Off" button (See figure below).

INSTRUCTIONS FOR CLEANING

WEBBING: Wipe occasionally with a warm soapy sponge; do not use bleach or dye, as these may affect the strength of the webbing.

SEAT FABRIC: A stiff clothes brush will remove dried-in marks, but most marks are best removed quickly with a warm damp soapy sponge, or some mild detergent (e.g. hand soap); rinse with water, then towel dry. Do not place cover in a dryer.

LIMITED WARRANTY

All Snug Seat products are warranted against defects in workmanship for One (1) year from the date of purchase. Snug Seat, Inc. will repair or replace, at no cost to the user, any defective parts returned to Snug Seat or its authorized agent.

Other Snug Seat® Seating Systems That Will Move You.

Indoors. Outdoors. Virtually anywhere you want to go over any terrain.

Snug Seat® has the seating system designed just for you.

Ask your dealer for further information on all our product lines
or call direct at 1-800-336-7684.

Child restraints could be recalled for safety reasons.

You must register this restraint to be reached in a recall. Send your name, address and the restraint's model number and manufacturing date to P.O. Box 1739, Matthews, NC, 28106 or call 800-336-7684.

For recall information, call the U.S. Government's Auto Safety Hotline at 1-800-424-9393 (202-366-0123 in D.C. area).



SNUG SEAT

INCORPORATED

P.O. Box 1739
10810 Independence Pointe Parkway
Matthews, NC 28106
1.800.336.7684 Fax 704.847.9577

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THE Gorilla

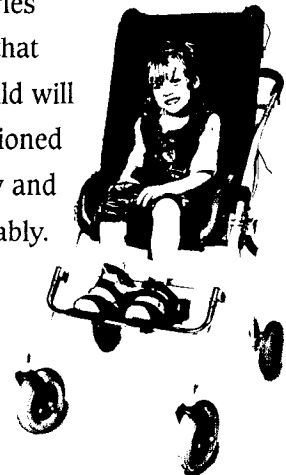


Mobility, Positioning & Transportation Products
For Children To Have Fun In!

A POSTURAL SEATING SYSTEM FOR
CHILDREN FROM 20 LBS. TO 105 LBS.

Durable, Comfortable And Supportive...

The GORILLA is the **ONLY CAR SEAT** that provides ample head, trunk, hip, and leg support for larger children with special needs. Our wide range of accessories ensure that your child will be positioned correctly and comfortably.



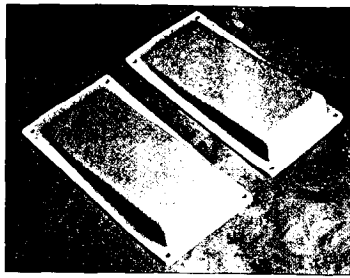
SHOWN HERE IN ROADRUNNER
MOBILITY BASE BY SNUG SEAT.

Built-In Growth...

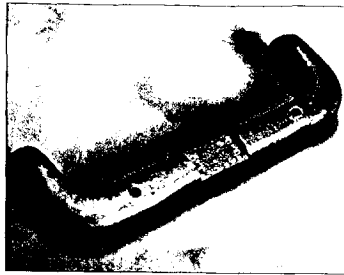
The GORILLA's innovative pad system and seat extension kit allows the seating area to be incrementally expanded from 8" x 8" to 14" x 14", ensuring your child many years of use.

THE GORILLA MEETS BOTH USA AND CANADIAN
MOTOR VEHICLE SAFETY STANDARD #213 FOR CAR SEATS.

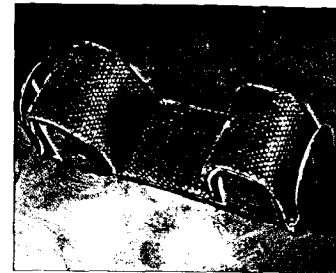
Put the GORILLA into one of our mobility bases
and you can take your child virtually anywhere.
Also appropriate for school bus transportation.



Seat Wedges increase seat angle 15° for children with less head control.



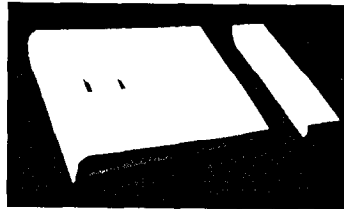
Seat Extension increases seating surface from 12" to 14".



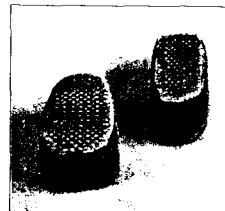
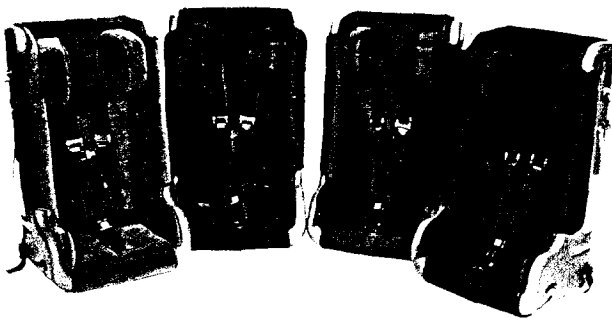
Headrest is height, width, angle and depth adjustable.

THE Gorilla

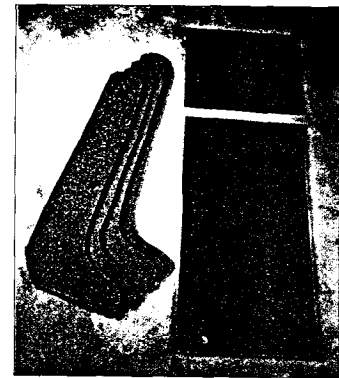
The GORILLA comes in Automotive Gray, Jet Black, Vibrant Blue, and Bright Red.



Wedge Seat Pad with filler pad for seat extension.



Abductors are available in two sizes.



Internal Pad Set fits under the seat cover to provide additional support.



Upholstered External Pad Set fits outside the cover for support.

TECHNICAL DATA

The Gorilla

Maximum (Min.) User Weight
Interior seat shell dimensions
Exterior seat shell dimensions
Interior (Exterior) back height
Seat depth – Standard pads
Seat depth – Optional pads and seat extension
Seat width – Standard pads
Seat width – Optional pads
Abductor – Large triangular
Abductor – Small oval
Height of shoulder strap slots

105 lbs. (20 lbs.)
15" wide x 12" deep
18" wide x 14" deep
28" (30")
11.25"
8" minimum to 13.25" maximum
13" minimum to 15" maximum
8" minimum
2.75" x 1.5" x 4"
2" x 4"
12", 17.5", 17.5", 20.5"

DEALER INFORMATION



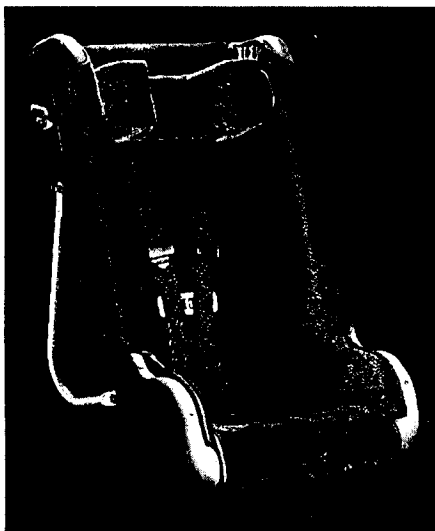
Mobility, Positioning & Transportation Products
For Children To Have Fun In!

PO Box 1739 • Matthews, NC 28106-1739

1-800-336-7684

Fax 704-882-0751

THE Gorilla®



Instructions

For The Gorilla Postural Seating System
and Automotive Safety Seat

Important!

Please Read and Save These Instructions
In The Pouch Attached To This Unit!



Mobility, Positioning & Transportation Products
For Children To Have Fun In!

PO Box 1739 • Matthews, NC 28106-1739

1-800-336-7684

Fax 704-882-0751

Snug Seat Owner Information

NAME: _____

ADDRESS: _____

CITY: _____

STATE: _____ ZIP: _____

TELEPHONE: _____

DATE PURCHASED: _____

DEALER NAME: _____

SERIAL NUMBER: _____

Recall Information

Child restraints could be recalled for safety reasons. You must register this restraint to be reached in a recall. Send your name, address and the restraint's model number and manufacturing date to Snug Seat, Inc., PO Box 1739, Matthews, NC 28106-1739 or call 800-336-7684. For recall information, call the U.S. Government's Auto Safety Hotline at 1-800-424-9393 (202-366-0123 in DC area).

Read and Follow These Instructions Exactly!

The GORILLA SEAT® conforms to Federal Motor Vehicle Safety Standard 213 and Canadian Motor Vehicle Safety Standard 213.3 IF CORRECTLY USED. It is designed for occupants weighing between 20 and 105 lbs. (9 and 48.00 kg), and up to 60 inches (152.4 cm) in height.

The installation of this seat to a vehicle is by means of the vehicle lap belt and tether strap.

WARNING!

Failure to follow each of the following instructions can result in your child striking the vehicle's interior during a sudden stop or crash. This child restraint **MUST BE SECURED** with a vehicle belt and tether as specified in this instruction booklet.

- Do not use this seat if the occupant's head extends above the top of the seat.
- Do not remove the shoulder, cratch, or lap belt from the seat for use as a separate item.
- This seat **MUST** be replaced if damaged, badly worn, or involved in a crash.
- Car interiors can become very hot when exposed to direct sunlight. Metal fittings on the belts will become hot when subjected to high temperatures, and could burn your child. Cover all fittings exposed to direct sunshine which could come into contact with your child.
- Do not place loose or heavy objects on the vehicle parcel shelf. These objects could injure a child in the GORILLA SEAT® during sudden stops or crashes.
- According to crash statistics, children are safer when properly restrained in the rear seating positions. Place the GORILLA SEAT® in the center of the vehicle's rear seat when possible.
- The GORILLA SEAT® should be securely belted to the vehicle, even when it is not occupied, since in a crash an unsecured child restraint system may injure other occupants.
- The tether supplied with this seat must be used at all times to ensure the safety of the occupant of the GORILLA SEAT®.
- Do not use the GORILLA SEAT® on side-facing or rear-facing seats.
- Do not use the GORILLA SEAT® in autos with "Passive Restraints" (a passive restraint is one in which the auto lap belt automatically surrounds the driver's or passenger's waist when the door is closed).
- Use forward facing only.
- Do not use in the front seat of a vehicle equipped with airbags.

Read and Follow These Instructions Exactly!

IT IS IMPORTANT THAT THE GORILLA SEAT® BE PROPERLY SET UP AND ADJUSTED FOR YOUR CHILD BEFORE PUTTING IT INTO A VEHICLE. This will require you to position the shoulder strap height and cratch belt location according to the instructions on pages 3 and 4 of this book.

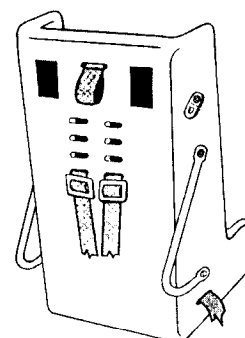
Page 3

Positioning The Shoulder Straps

There are four sets of slots in the back of the seat which are provided for your child's comfort and security (see figure 1 below). The slots are the following height from the seat base.

- Top Slots – 19.0"
- Second Slots – 16.0"
- Third Slots – 13.5"
- Fourth Slots – 10.0"

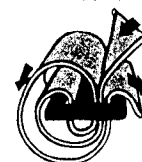
Figure 1.
Looking at
back of seat.



Put the child in the seat and select the slot just above the child's shoulders. To change to your selected slot, the strap must be removed from the buckle. Note figure 2 below which shows how to properly rethread the shoulder strap through the buckle.

IMPORTANT: Shoulder strap adjuster must be threaded exactly as shown.

Figure 2. Correct routing of
strap through the buckle.



Adjusting Tension Of Chest Harness and Seat Belt

To tension the chest harness – Pull excess strap through adjusters. Allow two fingers of slack between shoulder straps and your child's chest.

To tension the seat belt – Pull excess slack through the buckles located on both sides of the seat. Allow two fingers of slack between seat belt and your child's body. See figure 2 for correct threading of the strap through the buckle.

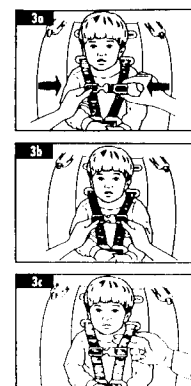
A harness tie is provided with each system and must be used to keep the harness straps high and snug on child's shoulders.

Lock the harness tie by snapping plastic buckle halves together. Check that harness tie is locked by pulling outward on each half (Figure 3a).

Position harness tie at midchest, about 3 inches (8cm) below the chin (Figure 3b).

Make sure harness is snug. This means that no more than two fingers can be placed between a shoulder strap and child's chest (Figure 3c).

IMPORTANT: Car seat straps must be properly threaded to ensure child's maximum safety during a sudden stop or crash.



Page 4

Positioning The Crotch Strap

Position the crotch strap through one of the two slots cut into the seat bottom. The crotch strap should be placed so that it is directly in front of the child's crotch when the child's bottom and back are flat against the seat. If it is necessary to reposition the crotch strap, see figure 2 for correct routing of the strap through the buckle.

NOTE: The crotch strap should not be placed so that it comes from under the child's crotch, as this may cause discomfort and possible injury. The buckle housing should be adjusted so that it is positioned at the user's waist.

Installation and Use Securing the Seat in a Motor Vehicle

The GORILLA SEAT® is designed to face forward in your vehicle. Position the seat in the upright position EXACTLY as shown (see figure 4 below), and pass the vehicle lap belt or lap/shoulder strap through the restraint bars, and snugly adjust belt so all slack is removed. Press down firmly with knee in center of seat to compress the vehicle's cushion as you are threading the vehicle belt so car seat is tightly belted. Buckle the seat belts.

Test by pulling the GORILLA SEAT® to be sure the vehicle belt stays tight. If the vehicle lap belt does not stay tight, move to another seating position or use the provided locking clip described below. If the GORILLA SEAT® is not anchored properly, the child's chances of being injured in a collision or sudden stop greatly increase. This adjustment is designed to be retained until the seat is repositioned.

WARNING!

Never use a lap-only or lap/shoulder belt across front of child; severe abdominal, head and/or neck injuries or death can result in a sudden stop or crash.

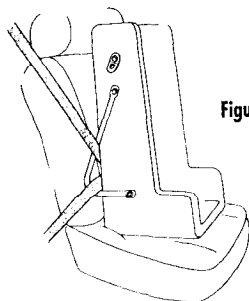


Figure 4.

Locking Clip

A locking clip is included with all systems (see figure 5). A locking clip must be used to secure the GORILLA SEAT® when your car has a shoulder and lap belt with a free sliding latch plate.

NOTE: Failure to use a locking clip could cause injuries to your child from the seat tipping over during normal braking or turning.

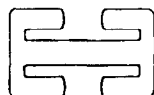


Figure 5. Locking Clip

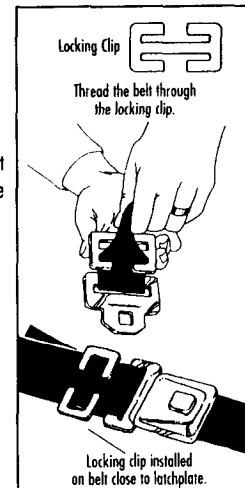
Page 5

How To Install A Locking Clip With A Free-Sliding Latchplate

You will find this clip included with the GORILLA SEAT®. If you do not have one, you can buy one in stores that sell safety seats or order it from a car safety seat manufacturer. Here is how to install the locking clip.

1. Put the belt through the correct path on the safety seat and buckle the belt.
2. Push down on the safety seat.
3. Pull up on the shoulder end of the belt until the lap belt is pulled tight.
4. Hold the two parts of the belt together at the latchplate mark with chalk and unbuckle the belt.
5. Thread the belt through the locking clip as shown. Put it close to the latchplate.
6. Buckle the belt again. If you put the clip on right, the belt will now stay tight around the safety seat.
7. To make sure your child's safety seat is secure, push down on it with your knee while you tighten the seat belt.

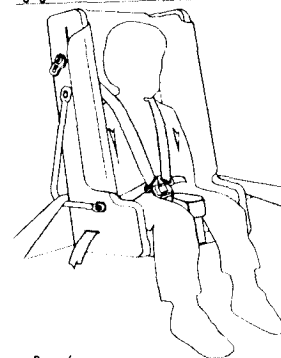
The locking clip that comes with a child safety seat is intended to be used in this way only.



Putting the Child in the Gorilla Seat

Put child into the GORILLA SEAT®. Child's pelvis and back should be flat against the seat and back to ensure maximum safety and comfort. Buckle the pelvic (lap) belt. Remove excess slack from the pelvic belt, making sure it snugly secures the pelvic area to the seat. Pass the shoulder straps over each of the shoulders, insert both of the buckle tongues into the crotch strap buckle, and remove excess slack in the straps. The shoulder straps should firmly retract the shoulders against the GORILLA SEAT® back. The shoulder straps should be snug enough for only two finger-widths of slack between the straps and the child. All buckle tongues should "click" into position when properly engaged.

Figure 6.
Correct position of child
and belt in seat.



Page 6

To release the lap or shoulder straps, press the red button found in the center of each buckle.

After securing the child in the GORILLA SEAT®, ensure that the auto lap belt and tether belt, which secure the GORILLA SEAT® to the vehicle, are fully tightened. Also check to make sure that the lap and shoulder belts found within the GORILLA SEAT® are snug and fully engaged.

WARNING!

Failure to secure these belts in accordance with these instructions will reduce the effectiveness of the GORILLA SEAT® in a crash, possibly causing injury to the occupant.

Positioning Accessories

Head Support Pads

The head support pads are held in place by tie strings passing through the back of the seat and secured by cord locks. To adjust the height of the head pads, depress the end of the cord lock to loosen the tie string. Move the head pad to the desired position and take up the slack in the cord lock to secure the tie string. Repeat for the other head pad.

Side Support Pads

The GORILLA SEAT® will accommodate a child weighing from 20 lbs. to 105 lbs. The interior size of the seat should be adjusted to provide appropriate support and comfort for each child. We suggest that about 1" of free space should be allowed on either side of the seated child. Internal and external pads can be purchased to fill in excess space for smaller children. See an authorized Snug Seat dealer for assistance.

Other Accessories

A variety of accessories are available to modify the seat for special needs applications, including an adjustable headrest, abductors, seat extension, seat shell wedge, and various support and positioning pads.

Use of Tether Straps

The tether anchor is an essential part of the GORILLA SEAT® design and is absolutely necessary to assure crashworthiness. Most vehicles come factory equipped with pre-drilled holes for tether mounting. The tether must be mounted through a metal, structurally sound, integral part of the vehicle body directly behind the seating position in which the GORILLA SEAT® is to be used. This may be the floor panel of the cargo area found in a wagon or hatchback. In a sedan, the anchor may be secured through the metal underbody of the rear package shelf.

Page 7

TETHER ANCHORAGE SYSTEM MOUNTING INSTRUCTIONS

The tether straps provided with your Snug Seat product are an integral part of the seat design and absolutely necessary to assure crashworthiness. All manufacturers including Ford, Chrysler, General Motors, Honda, etc., provide anchor hardware and installation instructions for vehicles manufactured since 1986. Although many local automobile dealers are not familiar with tether systems, they can provide you with mounting instructions and an anchorage kit by contacting their companies.

The tether strap system provided with your Snug Seat will work with virtually any tether anchor. If you have difficulty obtaining tether information from your local dealer, please contact Snug Seat, Inc. on our toll free number at (800) 336-7684.

INSTALLING A TETHER ANCHOR

It may be necessary to create your own tether mounting point in older cars (models before 1986). We have provided the necessary anchor hardware with your seat to allow you to perform this installation yourself. You will find the installation instructions on the following pages. Your automobile dealer or a local van conversion shop should be able to mount this hardware for you if necessary.

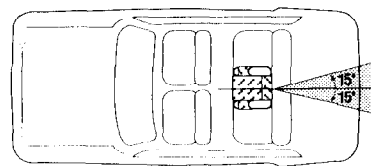
WARNING!

Failure to follow each of the installation instructions can result in your child striking the vehicle's interior during a sudden stop or crash, resulting in serious injury or death.

The tether must be mounted through a strong metal, and structurally sound part of the vehicle body. The tether anchor must also be located directly behind the seating position in which your child's restraint system is to be used. The location of the anchorage may be the floor, such as in a van or bus, or the fixed metal floor panel of the cargo area found in a station wagon or hatchback. In a sedan or coupe the anchor may be secured to the metal underbody of the rear package shelf or to a point inside the trunk.

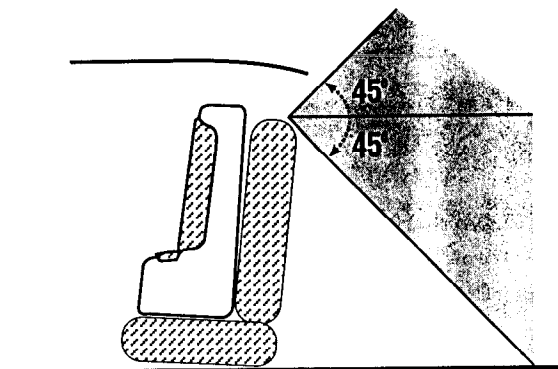
CAUTION

- Do not mount the tether anchor in moldings or storage doors.
- If drilling through the vehicle floor, take care not to hit the gas tank, gas lines, brake lines, exhaust pipes, cables, etc.
- If the anchor is located in the floor of the vehicle, the hole must be properly sealed to prevent exhaust fumes from leaking into your vehicle.
- If the anchor bolt is ever removed, the hole in the floor must be sealed to prevent the possibility of exhaust fumes from entering the passenger compartment.
- Do not mount the tether anchor within 1 1/4" of any larger holes.
- The tether anchor bolt should be located at least 10"-12" to the rear of the child restraint system to allow sufficient distance to tighten the tether strap.

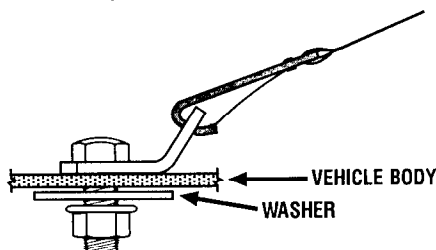


The anchorage point should be central to the center of your Special Needs Seat when fitted (15° maximum deviation). Position the anchorage point within the shaded area as shown above.

Page 8



The most appropriate location for the tether anchor will vary depending on the make and type of vehicle. When choosing the location for the tether anchor, the angle between the tether strap (when tight) and the floor or roof must be less than 45°. Position the anchorage point within the shaded area shown above.



When you have made all the required checks, drill a $\frac{1}{4}$ " diameter hole where required. Bolt the anchor bracket to the car's structure (as shown above). Make sure the anchor bracket is tightened securely. The tether bracket must be bolted directly to a strong metal part of the vehicle.

Once the anchor is installed, pull excess webbing through the tether length adjusters (with tether attached to child seat) until the tether straps are tight. Always make sure the tether straps are buckled and adjusted snugly before driving.

Using A Seat Belt For The Tether Anchor

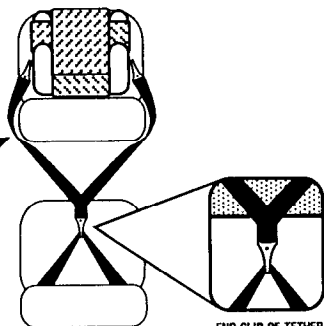
The National Highway Traffic Safety Administration recommends that children 12 and under should ride buckled up in the rear seat, and that small children should ride in a rear seat in child safety seats approved for their age and size. We do not recommend using a child restraint device in the front seat of a vehicle, however there are some children with special medical needs that require constant observation and must be near the caregiver/driver. If a child must be placed in the front seat, place the vehicle seat as far back as possible.

If there is no anchorage attachment located behind the front seat, attach the tether to the seat belt located directly behind your Snug Seat (as shown at top next page).

This method can also be used in vehicles with more than two rows of seats (vans, station wagons, etc.).

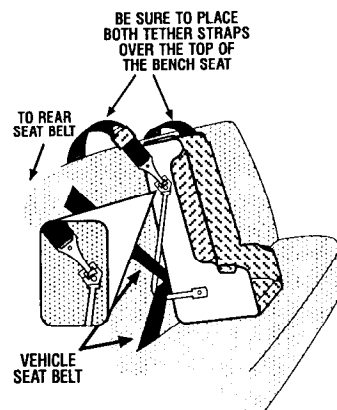
TYPICAL FRONT BUCKET SEAT PLACEMENT AND CONFIGURATION FOR TETHER ATTACHMENT TO REAR SEAT BELT

NOTE: POSITIONING OF TETHER BELTS MUST GO AROUND EACH SIDE OF BUCKET SEAT



END CLIP OF TETHER IS ATTACHED OVER GATHERED MIDDLE OF FASTENED REAR SEAT BELT

If your child's seat must be placed in the front seat and your vehicle has bench seating, the child restraint should be located at the center front seating position with the tether straps going over the back of the seat (as shown below).



⚠ WARNING!

Do not attach a tether strap to a "Passive Restraint" or seat belt which does not lock into place.

Instructions For Cleaning

WEBBING: Wipe occasionally with a warm soapy sponge: do not use bleach or dye, as these may affect the strength of the webbing.

SEAT FABRIC: A stiff clothes brush will remove dried-in marks, but most marks are best removed quickly with a warm damp soapy sponge, or some mild detergent (e.g. hand soap): rinse with water, then towel dry. Do not place cover in a dryer.

Limited Warranty

All Snug Seat products are warranted against defects in workmanship for One (1) year from the date of purchase. Snug Seat, Inc. will repair or replace, at no cost to the user, any defective parts returned to Snug Seat, Inc. or it's authorized agent.

Any child restraint device that has been involved in a vehicular crash must be replaced. To receive a replacement Snugg Seat contact our Customer Service Department at 800-336-7684. They will ask that you return the old seat along with the accident report confirming the crash incident. This is required for all courtesy replacement request claims. There is also a charge of \$35.00 to cover the cost of shipping and handling the claim.

Fitting Notes

[illegible]

THE SpelCast



Mobility, Positioning & Transportation Products
For Children To Have Fun In!

A CAR SEAT FOR CHILDREN IN SPICA CASTS.



Standard Five Point
Harness System

Forward and Rear Facing...

All 50 states require that children under a certain age ride in approved car seats when traveling in motor vehicles. The SPELCAST enables children with spica or hip casts to enjoy the same protection provided by commercially available car seats. Each unit is equipped with a five-point harness to provide maximum adjustability, and an optional top tether can be installed to improve crash protection for larger children.

The SPELCAST is used rear-facing for children weighing less than 20 pounds, and forward facing for children between 20 and 40 pounds. As with all CRDs, the rear seating positions found in motor vehicles are the preferred locations for this product. The center rear seating location is the recommended location if available, because it is the safest location from possible penetration in a crash. Never use the SPELCAST in the front seat of a vehicle with airbags.

THE SPELCAST COMPLIES WITH ALL REQUIREMENTS
OF FEDERAL MOTOR VEHICLE SAFETY STANDARD #213.

TECHNICAL DATA

The SpelCast

Maximum (Min.) User Weight 40 lbs. (10 lbs.)

YOUR SNUG SEAT DEALER IS:

SPELCAST CRD

**The Special Child Restraint Device For
Children Who Require a Pelvic Cast**



12801 EAST INDEPENDENCE BLVD.
P.O. BOX 1739
STALLINGS, NC 28105

INSTALLATION INSTRUCTIONS AND PRODUCT INFORMATION

Read **ALL** the information that follows completely **BEFORE** using the SPELCAST.
Keep these instructions in the envelope at the rear of the seat.

Should you have any questions regarding the SPELCAST
please call our toll free number 1 (800) 336-7684

RECALL NOTICE

Child restraints could be recalled for safety reasons. You must register this restraint to be reached in the event of a recall. Send your name, address and the restraint's model number and manufacturing date to P.O. Box 1739, Matthews, NC, 28106 or call 800-336-7684.

For recall information, call the U.S. Government's Auto Safety Hotline at 1-800-424-9393 (202-366-0123 in D.C. area).

WARNING!!

- Never use the SPELCAST in a rear facing position on the front seat of a vehicle with air bags. **FAILURE TO FOLLOW THIS WARNING MAY RESULT IN SERIOUS INJURY OR THE DEATH OF YOUR CHILD.**
- Always anchor the SPELCAST with the vehicle seat belt, even when not occupied. In an accident, a non-secured car seat may injure someone.
- **DO NOT ATTEMPT TO SECURE THE SPELCAST OR ANY CRD IN A VEHICLE POSITION WITH AUTOMATIC BELTS!** If such a seating position has to be used, **YOU MUST** obtain a supplementary, manually adjustable, child restraint belt from your vehicle dealer.
- Adjust the harness system snugly. Loose straps allow greater movement of the child in an accident.
- If used for children less than 20 pounds, the SPELCAST **MUST** face the rear of the vehicle.
- Use only on vehicle seats with seat backs that lock into place.
- Use only on forward-facing vehicle seats - **DO NOT USE** on rear-facing or side-facing vehicle seats.
- Rear seats are safest. Child restraint devices should be installed in a rear seat in vehicles with two rear seats and in the center rear seat in vehicles with a center rear seating position.
- Do not change the seating angle when your child is in the SPELCAST.
- When the SPELCAST is used rear-facing put the vehicle's adjustable headrest in its lowest position. The vehicle seat back against which the SPELCAST is placed should be fully padded and free of hard objects.
- To prevent burns to your child on hot sunny days, check the seat cover and metal parts for heat before placing your child in the SPELCAST.
- Do not allow sharp or heavy objects to be loose in your car, place in the trunk. Anything loose in the car can cause injury in an accident.

DANGER !!

FAILURE TO FOLLOW EACH OF THE INSTALLATION INSTRUCTIONS COULD CAUSE YOUR CHILD TO STRIKE THE VEHICLE'S INTERIOR DURING A SUDDEN STOP OR ACCIDENT RESULTING IN SERIOUS INJURY OR DEATH.

IMPORTANT INFORMATION

The SPELCAST is a specially designed child restraint for use by children required to wear a pelvic cast. This Child Restraint Device (CRD) has been dynamically tested and meets all the requirements of Federal Motor Vehicle Safety Specification (FMVSS) 213 without the use of a Top Tether Strap. An optional Top Tether Strap can be purchased directly from Snug Seat, Inc. A tether's use can significantly reduce movement of the CRD's occupant in an accident.

The SPELCAST is intended for children in pelvic casts weighing less than 40 pounds (excluding cast weight) and are less than 40 inches tall (child's head cannot extend above top of the seat.)

Use mild soap and water to clean the vinyl cover and foam under pads.

IMPORTANT!!

A **LOCKING CLIP** is supplied with each SPELCAST. This device is required to securely install the SPELCAST in vehicles equipped with seat and shoulder belts with a "sliding tongue" as illustrated below (Figure 1). The sliding tongue allows the belt system to move freely when it is buckled. The locking clip prevents the "sliding tongue" from movement and properly secures the SPELCAST.

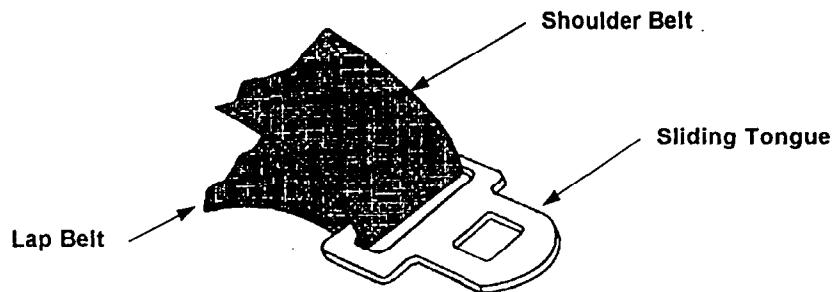


Figure 1

If the SPELCAST is installed in a seating position with a "sliding tongue" lap-shoulder belt, you must use a Locking Clip (Figure 2). Failure to do so may result in serious injury to your child and other occupants in the auto.

The Locking Clip holds the lap and shoulder belts together allowing you to pull the lap belt tightly, to firmly hold the SPELCAST in space. (Figure 3)

To use the Locking Clip, install the seat in the vehicle per the instructions. Pull the shoulder belt through the sliding tongue to remove all slack webbing from the lap belt. Grasp the webbing and sliding tongue to prevent it from sliding along the webbing and disconnect the tongue from the buckle.

Fold the webbing and thread onto locking clip, one side at a time. Keep locking clip close to sliding tongue - approx. 1/2". Snug the locking clip against the sliding tongue.

Insert sliding tongue into the buckle and make certain the SPELCAST is secure, and all slack webbing is removed from lap belt.

Once properly installed, this adjustment is designed to be retained until clip is removed or vehicle seat is repositioned.

LOCKING CLIP

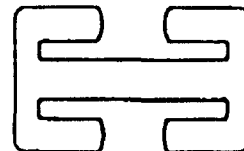


Figure 2

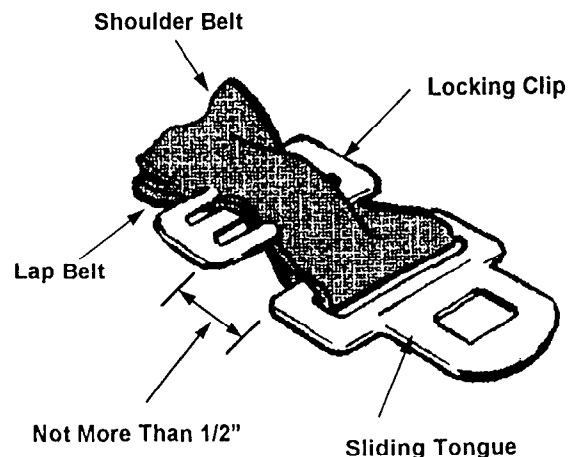


Figure 3

FORWARD-FACING INSTALLATION FOR CHILDREN WHO WEIGH BETWEEN 20 & 40 POUNDS AND ARE LESS THAN 40 INCHES TALL.

1. Put SPELCAST in an upright position. Hold base and pull seat back up as in Figure 4. Push second bar over first bar and continue to pull seat back as in Figure 5. The seat may be used in a reclined position when forward-facing, but it must not be changed from one position to the other when child is in seat.

2. Harness straps must always be threaded through the upper seat slots when used forward-facing. To change harness strap(s) position, undo straps from steel splitter plate at back and re-thread through correct slots. Reconnect straps to steel splitter (Figure 6).

3. Put SPELCAST forward-facing in vehicle and position vehicle seat belts as shown in Figures 8 and 9. Buckle seat belt after firmly compressing SPELCAST into vehicle seat. Use your knee to do this as shown in Figure 7.

The auto seat belt **MUST** be put in the right place to properly hold the SPELCAST in a crash. The seat belt must also be as tight as possible. See previous hint on use of your knee to compress auto seat to tighten.

4. Always test installation by tilting the SPELCAST from side to side. Make sure the lap belt holds the SPELCAST firmly. If the belt slips, turn the adjustable end (tongue) of the belt upside down before buckling. This prevents the belt from loosening. Test again to be sure the SPELCAST is secure.

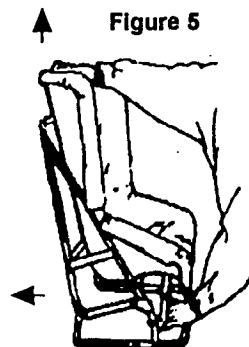


Figure 6

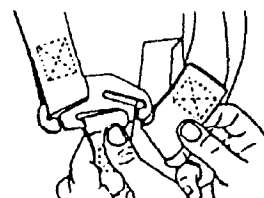


Figure 7

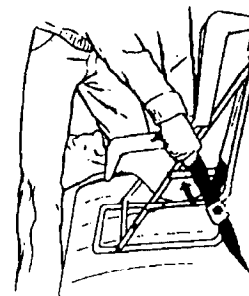
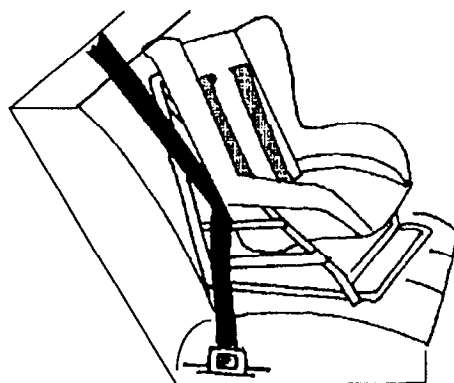
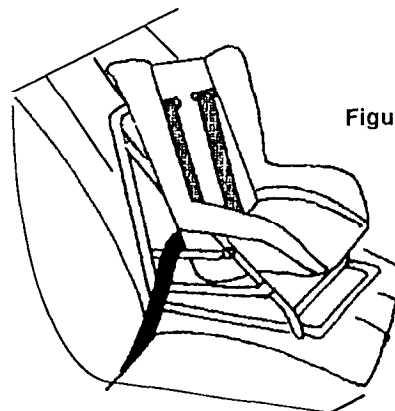


Figure 8



Seat Locations With Combination
Lap/Shoulder Belts

Figure 9



Seat Locations With Lap
Belts Only

FORWARD FACING INSTALLATION - CONTINUED

5. Put child in SPELCAST as far back against the backrest as possible. The child's head **MUST NOT** extend above the top of the seat.

6. Place child's arms under shoulder straps and buckle straps to the crotch strap (Figure 10).

Use the shoulder strap adjusters to snugly tighten the shoulder straps so only two fingers can be put between shoulder straps and child. Shoulder strap adjusters must be threaded exactly as shown (Figure 11) to prevent possible slippage or loosening of the shoulder straps.

7. Place harness tie between shoulder straps and position at child's mid-chest.

8. Check again that only two fingers of slack (Figure 12) exist between child and straps. Make sure the seat belt is as tight as possible.



Figure 10

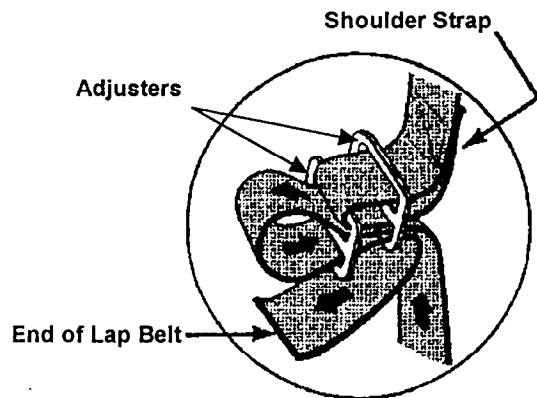


Figure 11

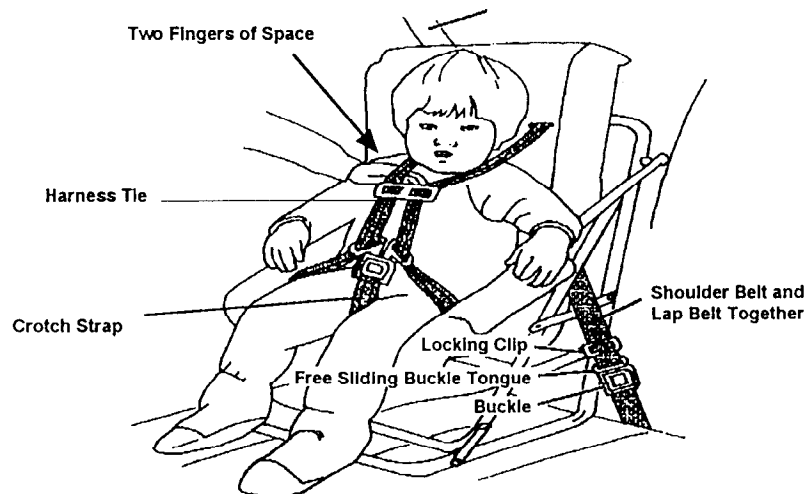


Figure 12

4

REAR-FACING INSTALLATION FOR CHILDREN WHO WEIGH LESS THAN 20 POUNDS AND ARE LESS THAN 26 INCHES TALL.

Generally children who wear a pelvic cast are older and will use the SPELCAST forward-facing. For those instances when the infant weighs less than 20 pounds, the SPELCAST **MUST BE** used rear-facing. Never use the SPELCAST in a rear facing position on the front seat of a vehicle with air bags. **FAILURE TO FOLLOW THIS WARNING MAY RESULT IN SERIOUS INJURY OR THE DEATH OF YOUR CHILD.**

Please follow the instructions below for correct rear-facing SPELCAST use (children weighing less than 20 pounds).

1. Recline SPELCAST by squeezing front two bars together while pushing down on its back (Figure 13).
2. Position harness straps through lower slots in the seat's back. To change straps position, undo from steel splitter plate (Figure 14) at back and re-thread through lower slots. Reconnect to splitter, one strap at a time.
3. Place infant as far back in SPELCAST as possible
4. Place infant's arms under shoulder straps and buckle straps to crotch strap.

Use the shoulder strap adjusters to snugly tighten the shoulder straps so only two fingers (Figure 15) can be placed between straps and infant. Shoulder strap adjusters **MUST** be threaded exactly as shown in Figure 16, otherwise they may slip and loosen straps.

5. Position harness tie between each shoulder strap and slide it up to infant's mid-chest.
6. The infant may require extra head support. This can be done with a rolled blanket, towels or diapers on each side of the infant.

NOTE!! Steps 3 through 6 may be done with the SPELCAST in the car, or if more convenient, in your home and both the infant and SPELCAST can be carried together to the car for the next steps.

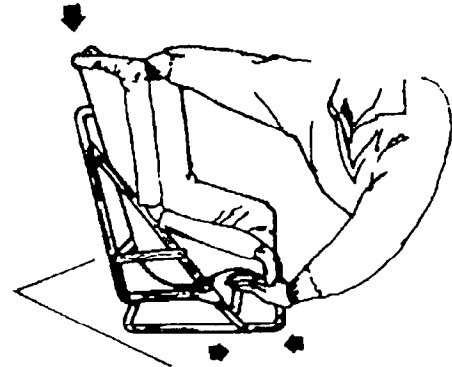


Figure 13

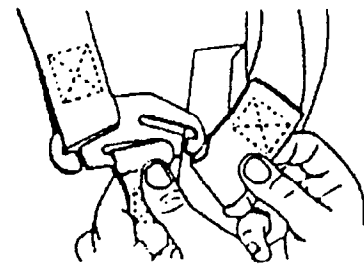


Figure 14

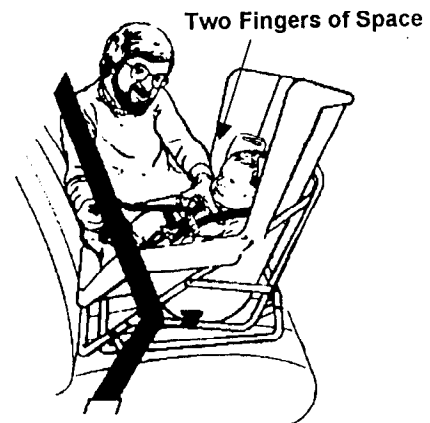


Figure 15

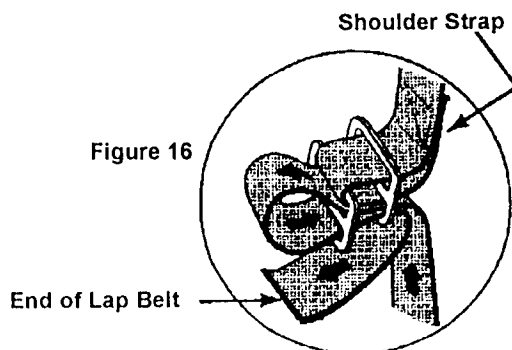


Figure 16

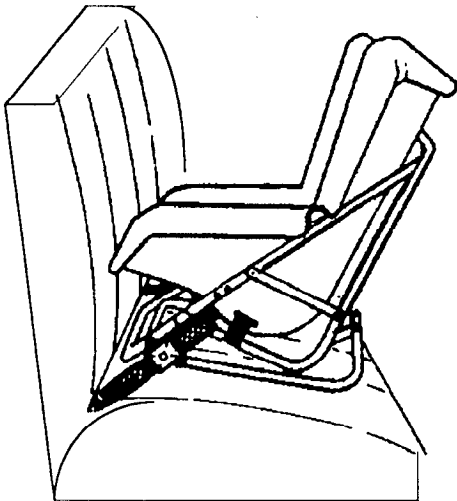
REAR-FACING INSTALLATION - CONTINUED

7. Put the SPELCAST facing backwards in the car. Position and buckle auto seat belt as shown below for rear (Figure 17) and front (Figure 18) auto seat locations. Tighten seat belt compressing the auto seat as you tighten the auto belt.

Place the auto's seat belt exactly as shown. Placed anywhere else, the SPELCAST may not protect the infant in a crash.

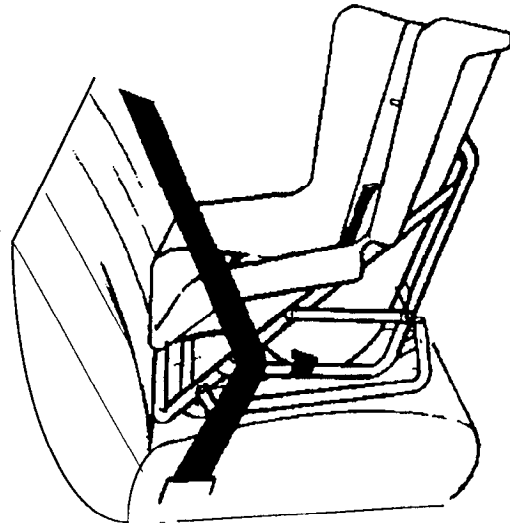
DO NOT face the SPELCAST forward with an infant weighing less than 20 pounds. **DO NOT** use the SPELCAST in a rear facing position on the front seat of a vehicle with air bags. The SPELCAST must be used only in the rear seat of vehicles with air bags when used for children under 20 pounds.

Figure 17



Rear-Facing Positioned In The Rear
Seat or Seat Locations With Lap
Belts Only

Figure 18



Rear-Facing Positioned In The Front
Seat or Seat Locations With
Combination Lap-Shoulder Belts

**DO NOT PLACE REAR-FACING
IN FRONT SEATS OF VEHICLES
WITH AIR BAGS! USE IN THE
REAR SEAT ONLY IN VEHICLES
WITH AIR BAGS.**

OPTIONAL TOP TETHER INSTALLATION

An optional top tether strap can be attached to the back of the SPELCAST shell. A top tether strap provides an extra anchor point for the SPELCAST when it is used in a forward-facing position. It reduces forward or sideways movement in an accident.

The SPELCAST meets the requirements of FMVSS 213 without a top tether. Use of the top tether offers extra protection in a crash which is why we suggest its use.

INSTALLATION

The most appropriate location for the tether anchor will vary depending on the make and type of vehicle. Most vehicles come factory equipped with pre-drilled holes for tether mounting. The tether anchor must be mounted through a metal, structurally sound, integral part of the vehicle body directly behind the seating position in which the SPELCAST is to be used. This may be the floor, such as in a van or bus, or the fixed metal floor panel of the cargo area found in a wagon or hatchback. In a sedan, the anchor may be secured through the metal underbody of the rear package shelf.

When choosing the location for the tether anchor, the angle between the tether strap (when tight) and the floor should not exceed 45 degrees. If you have trouble determining the most secure location for the tether anchor, please consult your auto dealer or a competent auto mechanic.

The tether anchor must be assembled through the car body as illustrated (Figure 19), making sure the large washer is underneath the mounting surface and tightened securely.

Once the anchor is installed, pull excess webbing through the tether length adjusters (with tether attached to child seat) until it is tight. Always make sure the tether strap is buckled and adjusted snugly before driving.

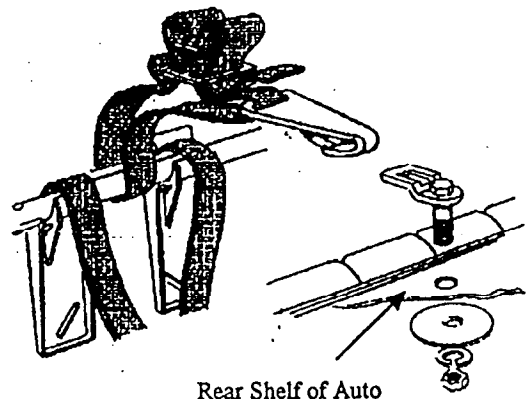
WARNING!

Do not mount the tether anchor in moldings or storage doors. If mounted through the vehicle floor, take care not to hit the gas tank, gas lines, brake lines, exhaust pipes, cables, etc.

Do not mount the tether anchor within 1.25" of any larger holes. The tether anchor bolt should be located at least 10"-12" to the rear of the SPELCAST to allow sufficient distance to tighten the tether strap.

Please call us if you have any questions concerning installation.

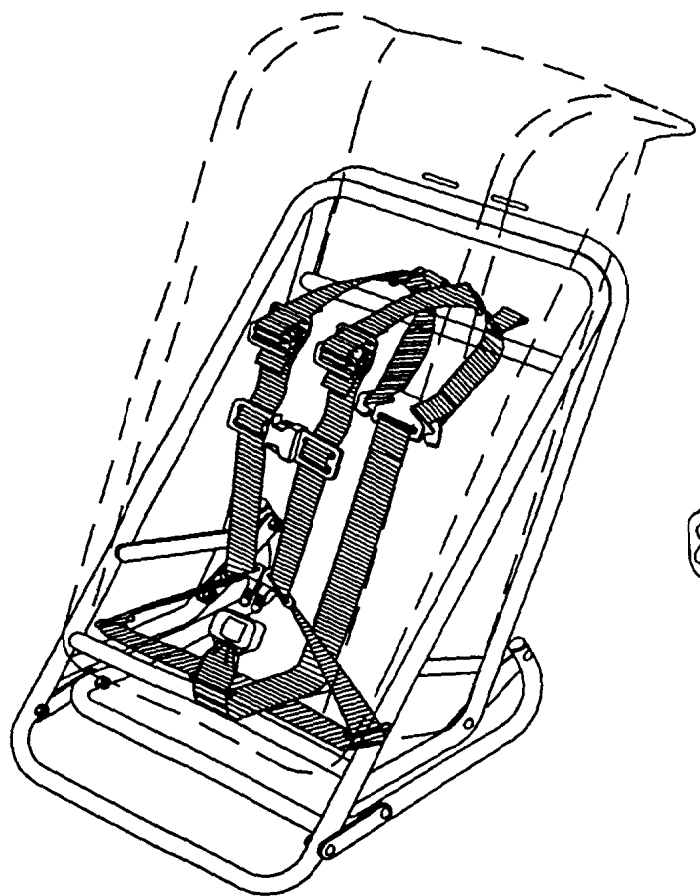
Figure 19



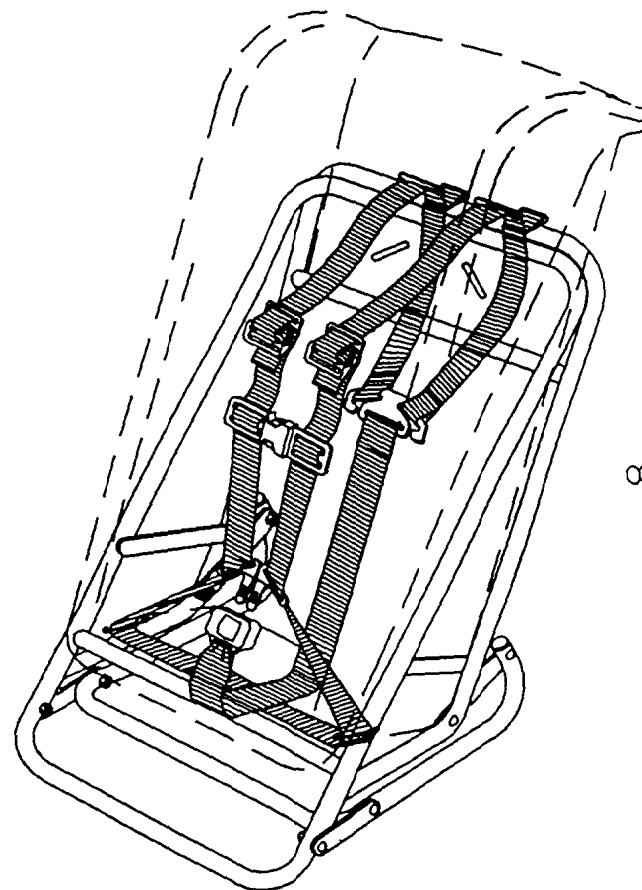
LIMITED WARRANTY

All Snug Seat products are warranted against defects in workmanship for One (1) year from the date of purchase. Snug Seat, Inc. will repair or replace, at no cost to the user, any defective parts returned to Snug Seat or its authorized agent.

LOWER SHOULDER
BELT ROUTING



UPPER SHOULDER
BELT ROUTING



8

SPELCAST RESTRAINT BELT ROUTING DIAGRAM

THE SS1000



**AN ULTRA-LIGHT CAR SEAT FOR CHILDREN
FROM 2 1/2 TO 8 YEARS OLD.**



Mom Will Love It...

The SNUG SEAT 1000 is designed to utilize your car's three point seat belt, and since the 1000 weighs only 3.5 lbs., it's easy to move from mom's car, to dad's trunk, to grandma's van...well you get the picture. Each unit includes a five point harness and head pillows for postural control, and a tray that provides upper extremity support. The seat wedge tilts the seat back 15°, so children that need to nap or those with weak neck muscles do not have to strain to maintain an upright head position.

Postural Support and Comfort...

The SNUG SEAT 1000 is manufactured with extra deep side wings for lateral support, and the built-in pommel and contoured seating surface facilitate excellent pelvic positioning. Foam seat and back cushions are placed under the seat cover for optimum seating comfort. Optional support pads are available for the trunk and hips.

THE SNUG SEAT 1000 MEETS BOTH U.S. AND CANADIAN MOTOR VEHICLE
SAFETY STANDARD #213 FOR CHILD RESTRAINT DEVICES.

TECHNICAL DATA

The SS1000

Maximum (Min.) User Weight	60 lbs. (30 lbs.)
Interior seat dimensions	14" wide x 10" deep
Exterior seat dimensions	16" wide x 17" deep
Interior (exterior) back height	24" (28")
Abduction (built into the seat shell)	1" high x 3" wide
Unit weight	3.5 lbs

YOUR SNUG SEAT DEALER IS:

THE SS 1000®



How To Use Your Snug Seat 1000 Booster Car Seat

Important!

Do not use this car seat until you read and understand these instructions!
Incorrect usage can mean serious injury or death to a child in a sudden stop or accident.

If you need help, call our Customer Service Department toll-free at 1-800-336-7684.



Mobility, Positioning & Transportation Products
For Children To Have Fun In!

P.O. Box 1739 • Matthews, NC 28106-1739
1-800-336-7684
Fax 704-882-0751

Important! Registration Information!

Child restraints (car seats) could be recalled for safety reasons. You must register this restraint (car seat) to be reached in a recall. Send your name, address, and the restraint's (car seat) model number and manufacturing date to:

Snug Seat, Inc.
P.O. Box 1739
Matthews, NC 28106-1739
or call: (800) 336-7684

For recall information, call the U.S. Government's Auto Safety Hot Line at 1-800-424-9393 (202-366-0123 in D.C. area).

Fill out the registration card attached to your car seat and mail today.

Table Of Contents

Basic Information	pg. 2
Height and Weight Limitations	pg. 3
Putting The Booster Seat In The Vehicle	pg. 4
Vehicle Seat Belt Systems	pg. 4-5
Putting Your Child In The Booster Seat	pg. 5-6
Product Care and Cleaning	pg. 7

Basic Information

CONGRATULATIONS!

You have just purchased a Snug Seat 1000 Booster Car Seat, designed to provide disabled children with comfort and postural support.

The Snug Seat 1000 meets all requirements of:

- Federal Motor Vehicle Safety Standard 213 (FMVSS-213) for the United States.

This restraint is not certified for aircraft use because there is no shoulder belt available.

! WARNING!

Failure to follow the instructions in this booklet can result in your child striking the vehicle's interior during a sudden stop or crash. Secure this child restraint with a vehicle seat belt as shown in this booklet. **DO NOT** substitute parts. If parts are missing, call 1-800-336-7684.

The National Highway Traffic Safety Administration alerts vehicle owners that, according to crash statistics, children are safer when properly restrained in the rear-seating positions rather than the front-seating positions of a vehicle.

However, not all vehicle seat belting systems will allow the use of a booster car seat. Read the section on seat belt systems carefully to determine proper use in your vehicle.

If you must use the front passenger seat with your booster car seat, be sure to consult your vehicle owner's manual regarding warnings/recommendations for using forward facing car seats in an airbag-equipped vehicle seating position.

Use of accessories and/or parts not supplied by Snug Seat, Inc. is not recommended and could cause serious injury or death.

Save this instruction booklet for future use. Store in the pouch located under the cover on the back of the seat.

No child restraint system (car seat) can guarantee protection from injury in every possible situation. However, proper use of a car seat may reduce the risk of serious injury or death!

! WARNING!

USE ONLY THE VEHICLE'S COMBINATION LAP/SHOULDER BELT SYSTEM WHEN RESTRAINING THE CHILD IN THIS BOOSTER SEAT or child will not be properly restrained. Never use a lap-only belt across front of child; severe abdominal, head and/or neck injuries or death can result in a sudden stop or crash.

IMPORTANT: Do not leave vehicle belt unbuckled on an unoccupied car seat. Car seat will be thrown about the vehicle even in a sudden stop. Children and other passengers may be injured. An unoccupied car seat must always be secured.

Height & Weight Limitations

The Snug Seat 1000 is designed to accommodate children weighing between 30 and 60 lbs. and whose height is between 35" and 50".

DO NOT USE if the top of child's ears are above the top of the seat (Fig. 1)

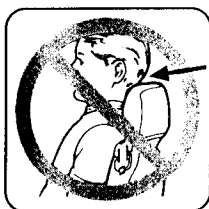


Figure 1.

Page 3

Where To Put The SS1000 In Your Vehicle

! WARNING!

The National Highway Traffic Safety Administration recommends that children under 12 years of age ride in the rear seat of vehicles equipped with airbags. Airbag systems are designed for specific vehicles. Snug Seat recommends that you consult your vehicle owner's manual regarding warnings/recommendations for using forward facing car seats in airbag-equipped vehicle seating positions.

Your car seat must be used with a vehicle combination lap/shoulder belt system (Fig. 2) that will hold it tightly while driving. Rear seat shoulder belts can be installed in many pre-1989 vehicles, and some can be installed by the consumer. Call your dealer or the manufacturer's customer service department for the parts you need.

Do not use on side-facing (Fig. 3) or rear-facing (Fig. 4) vehicle seats. Serious injury or death may occur.



Figure 2.



Figure 3.

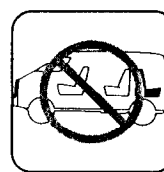


Figure 4.

Vehicle Seat Belt Systems

THE SNUG SEAT 1000 CAN ONLY BE USED WITH A COMBINATION LAP/SHOULDER BELT SYSTEM. IDENTIFY YOUR VEHICLE SEAT BELT SYSTEM BEFORE USING THIS CAR SEAT.

- 1). CONTINUOUS LOOP COMBINATION LAP/SHOULDER BELT WHERE BELT SLIDES FREELY THROUGH LATCH PLATE.
- 2). COMBINATION LAP/SHOULDER BELT WITH LOCKING LATCH PLATE. (Fig. 5). OK to use.
- 3). LAP/SHOULDER BELT WITH SEWN LATCH PLATE (Fig. 6). OK to use.
- 4). BELTS ANCHORED FORWARD OF SEAT CREASE (Fig. 7). OK to use.

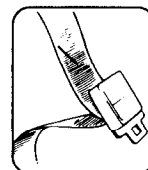


Figure 5.

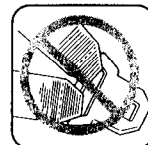


Figure 6.

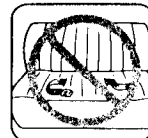


Figure 7.

Page 4

The following seat belt systems must **NOT** be used. They will not restrain a car seat and your child could be seriously injured.

- 5). **MANUALLY ADJUSTABLE LAP-ONLY BELTS** (Not pictured). **Do not** use. Severe abdominal, head and/or neck injuries or death can result in a sudden stop or crash.
- 6). **AUTOMATIC (PASSIVE) SEAT BELTS** (Fig. 8). **Do not** use this type of vehicle belt system to anchor your booster car seat. See your dealer for options.

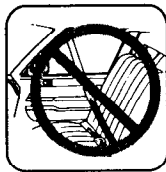


Figure 8.

Putting Your Child In The Booster Seat

WARNING!

Never use a lap only belt across front of child; severe abdominal, head and/or neck injuries or death can result in a sudden stop or crash.

WARNING!

Each Snug Seat 1000 is equipped with an internal five point harness system, and tray (upper extremities). The harness and tray are furnished to provide upper trunk support only for disabled children. The harness and tray **do not provide protection** in the event of a vehicle crash. The lap and shoulder belt provide restraint in a crash.

- 1). Place the Snug Seat 1000 in an appropriate seating position as described in vehicle's "Seat Belt Systems" on page 4.
- 2). Sit the child in the Snug Seat 1000 and secure the internal harness system. There are two sets of slots in the back of the seat which are provided to properly position the shoulder straps. Put your child in the seat to determine which slot is located just above the child's shoulders. The shoulder straps thread through the fabric, through the seat shell, through a white plastic reinforcement bracket, and then secured with a metal buckle. To change slots, the metal buckles found on the back of the seat must first be removed. It will be necessary to open the back of the seat cover to thread the belt through the desired hole and through the plastic bracket. (Fig. 9) below shows how to properly rethread the shoulder straps through the buckles.



Figure 9. Correct routing of strap through the buckle.

Adjusting The Shoulder Straps and Harness Tie

To tension the chest harness – Pull excess strap through adjusters. Allow two fingers of slack between shoulder straps and your child's chest.

A harness tie is provided with each system and must be used to keep the harness straps high and snug on child's shoulders.

Page 5

Lock the harness tie by snapping plastic buckle halves together. Check that harness tie is locked by pulling outward on each half (Fig. 10A).

Position harness tie at midchest, about 3 inches (8cm) below the chin (Fig. 10B).

Make sure harness is snug. This means that no more than two fingers can be placed between a shoulder strap and child's chest (Fig. 10C).

- 3). The Snug Seat 1000 is equipped with a shoulder belt guidance and locking device. Thread the vehicle shoulder belt through the shoulder belt guide, making sure that the vehicle lap/shoulder belt is tight across the child's lap and shoulder (See Fig. 11). Make sure that there are no twists in the seat belt.
- 4). The vehicle lap/shoulder belt should be attached so that the diagonal belt does not touch the neck area or stomach (Fig. 10). Make sure that the buckle is engaged with a definite "click".
- 5). Attach the Velcro tabs located on the side of the tray, to the velcro located on the sides of the front of the seat.



Figure 10.

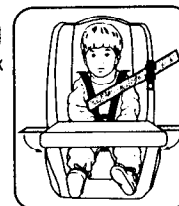


Figure 11.

A car seat's metal and plastic parts can become very hot when left in warm weather even in the shade. These can cause serious burns to unprotected skin. Drape a blanket over the car seat to keep it cool when not in use. Always check metal and plastic parts before putting your child in the car seat.

Page 6

Product Care And Cleaning

The covers can be removed for washing. Use a maximum water temperature of 85°F (30°C), no more. Do not spin dry or iron.

Snuggly does not recommend loaning or passing along your car seat when you are finished using it. Please do not allow anyone (baby-sitter, relatives, etc.) to use your child's car seat without first understanding all of the instructions in this booklet.

Snuggly has a policy of providing a replacement car seat at no charge for any of its car seats that have been involved in a vehicular crash. We require proof of the crash (police report) and return of the car seat involved. The damaged car seat must be returned at the owner's expense. A \$25.00 shipping and handling fee is charged to deliver the new seat.

Replacement Parts

A. Seat Cover	\$ 75.00
B. Harness Tie	2.50
C. Five-Point Harness System	95.00
D. Seat Wedge Kit	50.00
E. Head Pillows (Pair)	25.00
F. Lateral Trunk Pads (Pair)	45.00
G. Lap/Shoulder Belt Guidance Device	10.00

Fitting Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

SUNRISE MEDICAL Mobility Products Division

7477A East Dry Creek Parkway
Longmont, CO 80503

<http://www.sunrisemedical.com>

Phone: Customer service (800) 456-8165
Other (303) 218-4500

Fax: (303) 218-4590

Product family at a glance for clinicians:

Popular name for device	Model/Order #	Useful for which diagnoses?
Sunrise Transit Option	Available for models below	Factory installed wheelchair securement system for Sunrise Medical pediatric chairs ONLY.
Pediatric seating (various)	Zippie, Zippie 2, Zippie TS, Zippie GS, Kid TLC, Kid EZ, Kid EX, Kid T-Rex	As a vehicle occupant protection system, must have factory installed Sunrise Transit Option, crash tested seating and Hardware configuration.

Infection control protocols or warranties available?

If yes, description attached?

History of Medicaid/insurance/state disability purchases for individuals?

If yes, roll call of states attached?

Product specifications at a glance for clinicians:

Device name	Height/Length ranges	Weight ranges	Recline ranges/options	RF range	FF range	Accessories for positioning
Zippie Series Pediatric Wheelchairs	10-16" width 10-20" depth	150 lbs limit	fixed recline or tilt-in-space. <u>*All Tilt-in-space or recline models must be transported in an upright, locked position.</u>	NO	ONLY	Must have factory installed Sunrise Transit Option, crash tested seating and hardware configuration
Kid Kart Series Dependent Mobility Device	6-14" width 6-14" depth	75 lb. limit	recline 85-130 degrees tilt 0-30 degrees <u>*SEE Above</u>	NO	ONLY	SEE ABOVE

Product installation specifications at a glance for clinicians:

Appropriate vehicle environments: (check any that apply)

☒ Cars, vans, pickups ☒ School buses ☐ Ambulances ☒ Other (specify): May be used with any vehicle using wheelchair tiedown and occupant restraints in compliance with the Society of Automotive Engineers J2249

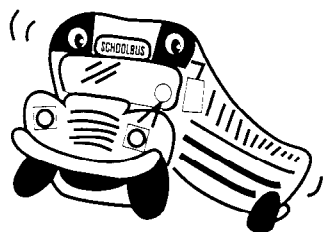
Product name	Tether needs/ Cam wrap needs	Tether/cam kits standard?	Installation assessment alerts
All Zippie and Kid Kart series pediatric seating			Must have factory installed Sunrise Transit Option, crash tested seating and hardware configuration. <u>*All models with Tilt-in-space or recline must be transported in an upright, locked position.</u>
			Recommended Tie-Down Systems: SAE J2249 compliant

Price range categories:

Purchasing programs for professionals or community programs:

Product name	Under \$50	\$51 – \$200	\$201 – \$500	\$501 – over
Sunrise Transit Option		X		
Pediatric chairs-prices vary based on model, accessories, etc.				

Other manufacturer comments regarding issues for medical/disability clinicians and safety specialists?



Questions & Answers

about the

Sunrise

Transit Option

The transportation of children in wheelchairs has been a challenge to school systems, educational and care facilities, parents and clinicians. Recently, Sunrise Medical became the first wheelchair manufacturer to offer an option that addresses transit safety for children in wheelchairs. It's called the Sunrise Transit Option and it provides easy-to-identify tiedown points for effective securement. The following provides answers to the most frequently asked questions concerning the Sunrise Transit Option.



Sunrise

Transit

Option

Answer

Guide



Sunrise Home Healthcare Group
7477 East Dry Creek Parkway
Longmont, CO 80503
800.456.8165

What is the Transit Option?

An option that has four easy-to-identify securement points on a wheelchair with crash-tested seating. The chair may then be used as a passenger seat during transit.

When can a Sunrise wheelchair be used as a passenger seat in transit?

If it has the Transit Option installed and is used properly with approved Wheelchair Tiedown and Occupant Restraints (WTORS).

What are WTORS?

A Wheelchair Tiedown and Occupant Restraint System (WTORS) refers to a system of straps that help manage the force of a wheelchair and its occupant during an impact.

When installed, will the Transit Option work with any manufacturer's WTORS?

No, only with WTORS that comply with the Society of Automotive Engineers' (SAE) standard: J2249 Recommended Practice: Wheelchair Tiedown and Occupant Restraint Systems for Use in Motor Vehicles.

What is SAE J2249?

A standard for testing WTORS to prove its effectiveness in a 30 mph, forward-facing simulated crash. It involves four-point restraints that attach from the chair to the vehicle floor and occupant restraints that cross the occupant's lap and shoulder.

WTORS manufacturers offer integrated and independent restraints. Does the Transit Option work with both?

Yes. The Transit Option works with any J2249 approved tiedowns.

What standards exist for wheelchair securement points?

None today. But ANSI/RESNA has proposed a set of standards, WC 19, that are being circulated for approval. Adoption of WC 19 is expected by the end of 1998.

What is the scope of WC 19?

WC 19 applies to:

- All types of wheelchairs that allow a user to attain a sitting position
- All vehicle transportation modes
- Wheelchairs designed to be secured by 4-point WTORS
- Wheelchairs in forward-facing position
- Wheelchairs used by persons who are 22 kg (48.5 lbs) through adult
- Complete wheelchair systems—Seating inserts if part of the chair

What does WC 19 specify?

- Design requirements
- Performance requirements
- Disclosure requirements
- Test procedures
- Labeling requirements
- Instructions and warning requirements
- Guidelines for securement point locations

For products with the Transit Option, can I make adjustments to the components or seating?

Yes, as medical equipment, adjustments to the components of the chair and seating are necessary to optimize its performance. These standard adjustments are outlined in each user manual and do not affect transit use. This does not include "altering" or "substituting" the wheelchair frame parts, components or seating. For example, drilling holes, changing fasteners used to secure the seat and back, or substituting the supplied seat and back are alterations that will void transit use.

Why do I have to buy Sunrise seating when I order a chair with the Transit Option?

The seat, back, attaching hardware, mobility base and the securement points are all part of an integrated system that is tested with the tiedown restraints. Numerous crash tests with an Anatomical Test Dummy (ATD) seated on Sunrise seating options were performed to determine the adequacy of the Transit Option design.

Will suppliers be able to secure their seating and attaching hardware to a chair that has the Transit Option installed?

No. The seat and back are an integral part of the tested design. It would be impossible to know reliably whether any untested seating would hold up under the impact stresses encountered in the test protocols. In fact, our test results indicate that many seat and back designs will not test successfully. Also, we must ensure that any seating used in transit is properly installed. Therefore, we can only provide the Transit Option with chairs that ship with factory installed, validated seating systems.

What seating options are available for chairs installed with the Transit Option?

Only seating systems that have been tested—the basic seat and back option offered with each wheelchair, the Conventional Seating System, and the Jay Fit System.

Are there attaching hardware limitations?

Yes. During testing, certain seat attaching hardware configurations were determined to be more robust and others were deemed inadequate. As a result, special seat attaching hardware kits have been developed for use with transit models.

Are headrests part of the transit system?

No, our testing did not require their use. However, a headrest supplied by Sunrise Medical or supported by our attaching options does not need to be removed for transit use. Headrests that strap or otherwise restrain the head should not be used.

Are positional devices such as lateral support pads, harness straps and lap belts considered occupant restraints?

No. Occupant restraints are specially designed to withstand the forces applied to them during impact and are only supplied by the WTORS manufacturers. The Transit Option was designed to offer a choice of structurally tested seats, backs and wheelchair frames. The use of secondary supports is not restricted by the Transit Option unless specifically noted or warned against.

What should be done with other accessories such as trays and respiratory equipment?

Remove them and secure them.

Will Sunrise retrofit the Transit Option on chairs sold prior to its market availability?

No. Manufacturing changes have been made to the frame and seat hardware that prevent us from retrofitting units manufactured previously.

What Sunrise products have the Transit Option available today?

The Zippie, Zippie 2, Zippie TS, Zippie GS and Kid TLC, Kid T-REX, Kid EZ and Kid EX.

Why is the Transit Option not yet available on other Sunrise wheelchairs?

We first focused on the population most at risk and least able to control their environment, children. Pending test results, the Transit Option will be available for other wheelchairs.

What is the cost of the Transit Option?

\$200 retail, which includes all necessary modifications for transit use.

How can I obtain a wheelchair with a Transit Option?

Sunrise Medical distributes its wheelchairs through a network of authorized suppliers. Orders may be placed with any authorized Sunrise Quickie Supplier. To locate a supplier in your area, call Sunrise customer service at 800-456-8165.

Why haven't manufacturers done this before now?

There were no standards in place telling the industry how to test wheelchair securement points and how best to configure the tiedown. In 1996, the creation of the SAE standard J2249 changed this. It allowed for a defined relationship between the tiedown and the wheelchair. Since then, Sunrise has taken the lead with other regulatory bodies to allow the marketing of this option.

Will Transit Option-equipped chairs be able to "grow" in the future to accommodate changing customer needs?

Yes. Free growth kits for Zippie frames will still be available. Frame components and replacement parts will be supplied with specific instructions for proper replacement. These instructions must be followed.

Is a chair with Transit Option always best?

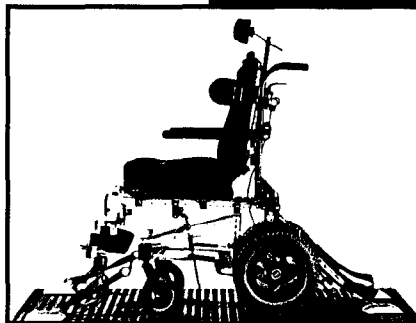
Wheelchairs are prescribed by clinicians to meet the medical needs of the individuals that use the product. Although Sunrise Medical offers an array of seating options, clinical conditions, local funding and service/delivery issues may conflict with the use of a chair with a Transit Option. Sunrise Medical endorses the practice of "choice" for consumers and always recommends the most appropriate product available be provided.

*Safe transportation is something
every child deserves.*



Sunrise Transit Option

- Four easy-to-identify securement points on the mobility base.
- Crash-tested for use with tiedown restraints that meet Society of Engineer standard J2249: Wheelchair Tiedown and Occupant Restraints for use in Motor Vehicles.
- Available for the Zippie, Zippie 2, Zippie TS, and Zippie GS pediatric wheelchairs and the Kid TLC, Kid EZ, Kid EX and Kid T-Rex.
- Available only with crash-tested seating and hardware configurations.
- Factory installation only.



Zippie TS
with Sunrise
Transit Option



Sunrise Home Healthcare Group • 7477 East Dry Creek Parkway • Longmont, CO 80503 • 800.456.8165 • In Canada 800.263.3390

© 1998 Sunrise Medical
#930439

ZIPPIE TS TRANSIT OPTION WARNING CARD

Warning

1. Use only Wheelchair Tiedown and Occupant Restraint Systems (WTORS) which meet the requirements of SAE J2249 Recommended Practice - Wheelchair Tiedown and Occupant Restraint Systems for Use in Motor Vehicles. Do not use WTORS designed to rely on the wheelchair structure to transfer occupant restraint loads to the vehicle.
2. The wheelchair has been dynamically tested in a forward-facing mode for a 30 mph (48-km/h) frontal impact test. The wheelchair must be forward-facing during transport.
3. To reduce the potential of injury to vehicle occupants, wheelchair-mounted accessories, such as trays and respiratory equipment, should be removed and secured separately.
4. Postural supports and positioning devices should not be relied on for occupant restraint.
5. Do not alter or substitute wheelchair frame parts, components or seating.
6. Sudden stops or impacts may structurally damage your chair. Chairs involved in such incidents should be replaced.

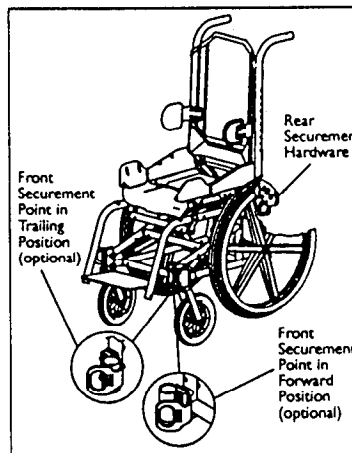


Figure 1

Instructions

1. If possible and feasible, the rider should transfer to the OEM vehicle seat and use the vehicle restraint.
2. If the wheelchair is used for transport, it must be used in a forward-facing seating position, and in an upright, locked position.
3. The rider must not weigh more than 150 lbs.
4. The location of the wheelchair securement points are shown in Figure 1.
5. Use only with WTORS that have been installed in accordance with the manufacturer's instructions and SAE J2249.
6. Attach WTORS to securement points in accordance with the manufacturer's instructions and SAE J2249.
7. Attach occupant restraints in accordance with the manufacturer's instructions and SAE J2249.

Note: To obtain a copy of SAE J2249 Wheelchair Tiedown and Occupant Restraint Systems for Use in Motor Vehicles, please contact: SAE International - 400 Commonwealth Drive - Warrendale, PA 15096 - 412.776.4970

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